

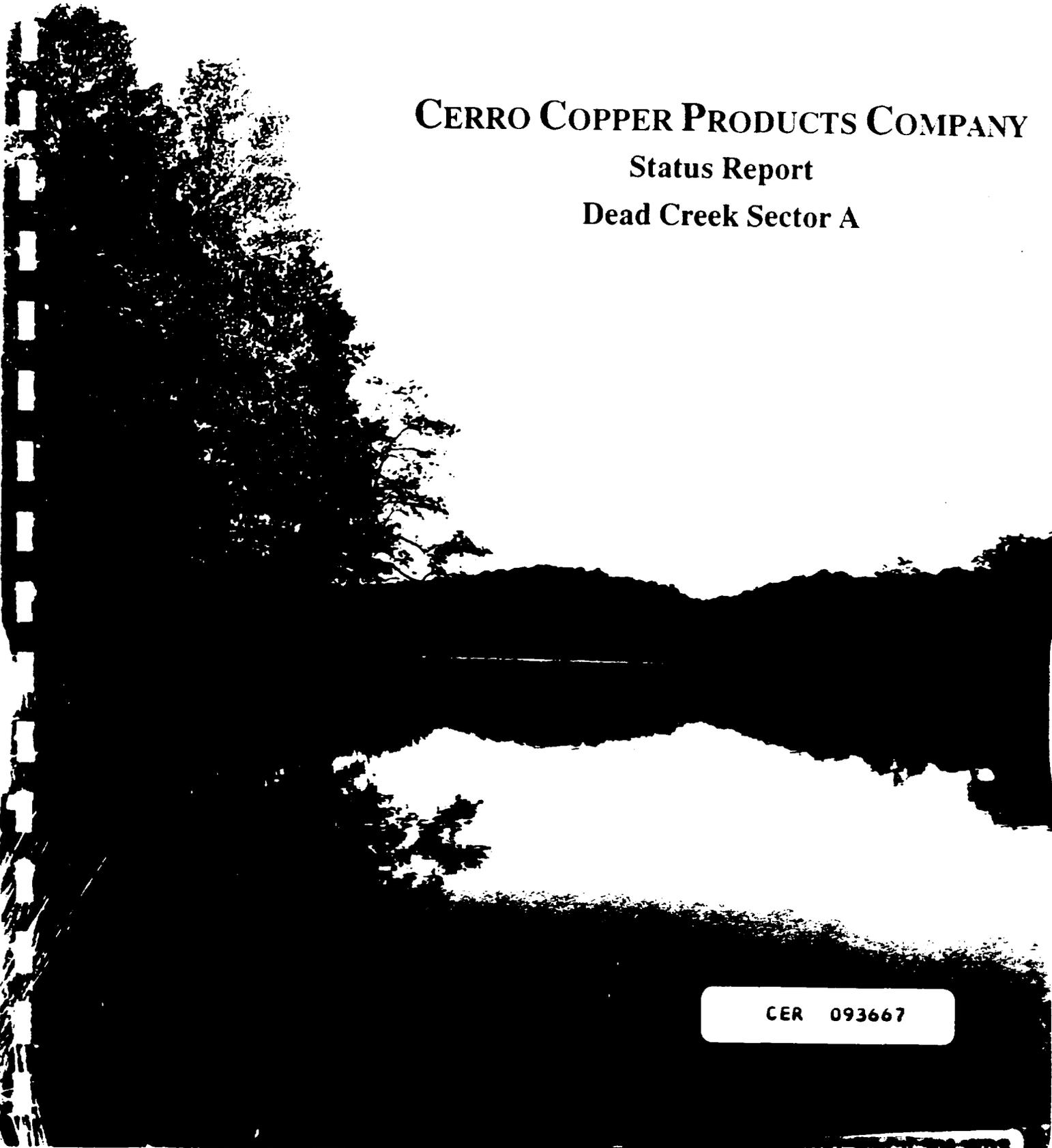
SDMS US EPA REGION V -1

**SOME IMAGES WITHIN THIS
DOCUMENT MAY BE ILLEGIBLE
DUE TO BAD SOURCE
DOCUMENTS.**

CERRO COPPER PRODUCTS COMPANY

Status Report

Dead Creek Sector A



CER 093667

CONFIDENTIAL 92-CV-204-WDS

AVENDT GROUP, INC.

ENGINEERS & SCIENTISTS

AVENDT GROUP, INC.

The Avendt Group, Inc. provides engineering and scientific consulting services to municipal, private, industrial and regulatory agency clients involved in water supply, water pollution control and solid wastes management. Our professional staff includes specialists in civil, chemical and environmental engineering complemented by biologists, environmental scientists, estimators, planners and operations personnel.

Through a wide variety of past and current projects, the Avendt Group, Inc. has developed extensive experience including diagnostic performance testing, personnel training, regulatory permitting and compliance programs. Our firm provides consulting services on a nationwide basis with corporate offices in the metropolitan Washington D.C. area and regional project offices.

Operations Division

The Operations Division offers a complete range of consulting engineering and scientific services to assist in the efficient and economical operation of water and wastewater treatment works and solid waste management facilities.

Recent U.S. Environmental Protection Agency studies have shown that proper operation and maintenance procedures can compensate for the majority of design limitations associated with water, wastewater and solid wastes management facilities. The Avendt Group, Inc. specializes

in optimizing existing facility operations by providing operation and maintenance cost reduction programs; diagnostic performance evaluations; remedial action protocols; personnel training for operations and administrative staff; operation and maintenance programs and technical support in regulatory permit compliance.

Engineering Division

The Engineering Division provides multi-disciplinary planning, design and construction phase services in water supply, water pollution control, industrial, solid and hazardous waste management and resource recovery. The increasing emphasis on higher operating efficiencies, regulatory agency standards and escalating energy and labor costs is a major consideration in our planning and design services. Innovative yet realistic solutions are developed through efficient designs based on years of sound practical design and operational experience.

Rehabilitation and expansion of existing facilities are a specialty of the Avendt Group, Inc. Project team members are assigned, based on the required engineering technical expertise, to complete each phase of a project from conceptual planning through performance testing and startup. By specializing in comprehensive facility improvement programs, each aspect of complex engineering projects is carefully evaluated to maintain schedules and optimize budgets.

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STATUS REPORT

Dead Creek Sector A

Site Investigations

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- I. Site Description
 - A. Site Diagram
 - B. Traverse / Zone Diagrams
 - C. Boring Logs
 - 1. Individual
 - 2. Traverse Section
 - 3. Longitudinal Section
 - D. Sediment Volume Table
 - E. Sediment Characteristics Table

- II. Chemical Characterization
 - A. Sample Testing Summary
 - B. PCB Data
 - 1. Table
 - 2. Contour Maps
 - 3. Frequency Distribution Graph
 - C. EPTox Data
 - 1. Table
 - 2. Contour Maps
 - D. Total Metals Data
 - 1. Table
 - 2. Contour Maps
 - E. Characteristics of Hazardous Waste Table
 - F. Appendix IX: Volatiles
 - G. Appendix IX: Semi-Volatiles
 - H. TCLP Data

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HISTORY OF PREVIOUS INVESTIGATIONS

Ecology and Environment (E&E) was contracted by the Illinois EPA (IEPA) in the early 1980s to conduct an RI/FS at the Dead Creek Project Sites. As a result of E&E's initial investigation, E&E performed additional work at the Dead Creek Project Area in 1987.

The Sverdrup Corporation was contracted as an oversight consultant by Lowenstein, Sandler, Kohl, Fisher, and Boylan during the E&E investigation. The Sverdrup Corporation performed a background information search on Cerro Copper Products Company and the IEPA Sauget/Dead Creek Project.

Geraghty and Miller, Inc., was contracted by the Sauget Sanitary Development and Research Association to perform an investigation of the lagoon at the American Bottoms Treatment Plant in December, 1987.

The Avedt Group, Inc., was retained by the Cerro Copper Products Company in June, 1989, to characterize Dead Creek Sector A (DCS-A) and Site I. The characterization of DCS-A was performed during the month of July, 1989. Work on Site I began in September, 1989.

DCS-A was characterized through the collection of 99 soil samples from 34 borings performed in the Dead Creek channel and on its associated creek banks. Soil boring logs were documented to identify stratigraphic changes and to note the extent of stained soils due to contamination. Samples were collected at various intervals of each boring and analyzed for the presence of PCBs and PCB Precursors, EP Toxicity, Pesticides and Herbicides, Total HSL Metals, Volatile and Semi-volatile Organic Compounds, Flash Point, pH, and Corrosivity.

The characterization of Site I began with the installation of eight well clusters consisting of three wells each. Each cluster consists of a deep well finished to bedrock (110 feet), and an intermediate well finished at a depth of 45 feet, and a shallow well finished at a depth of 25 feet. Two well clusters were placed upgradient of Site I and six well clusters were installed downgradient of Site I to monitor groundwater entering and leaving the site. Groundwater samples will be collected on a quarterly basis to quantify groundwater contamination.

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PLANS AND MANAGEMENT

Sample and Analysis Plan for Creek Bottom Sediment Characterization Project: Dead Creek Sector A

- 1.0 Site Description
- 2.0 Site Investigation
- 3.0 Sampling Plan
- 4.0 Data Summary
- 5.0 Final Report

Health and Safety Plan for Creek Bottom Sediment Characterization Project: Dead Creek Sector A

- 1.0 Site Description
- 2.0 General Information
- 3.0 Personal Protective Equipment
- 4.0 Emergency Medical Care and Phone Numbers
- 5.0 On-Site Activities
- 6.0 Equipment Check Lists

Quality Assurance Project Plan for Creek Bottom Sediment Characterization Project: Dead Creek Sector A

- 1.0 Introduction
- 2.0 Project Description
- 3.0 Project Organization and Responsibility

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Dead Creek Sector A - Site Characterization and Investigation

- 1.0 Methodology
- 2.0 Site Geology
 - 2.1 Site Stratigraphy
 - 2.2 Creek Cross-Sections

Site I Characterization and Investigation

- 1.0 Methodology
- 2.0 Site Geology
 - 2.1 Site Stratigraphy
 - 2.2 Groundwater Monitoring

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SITE DESCRIPTION

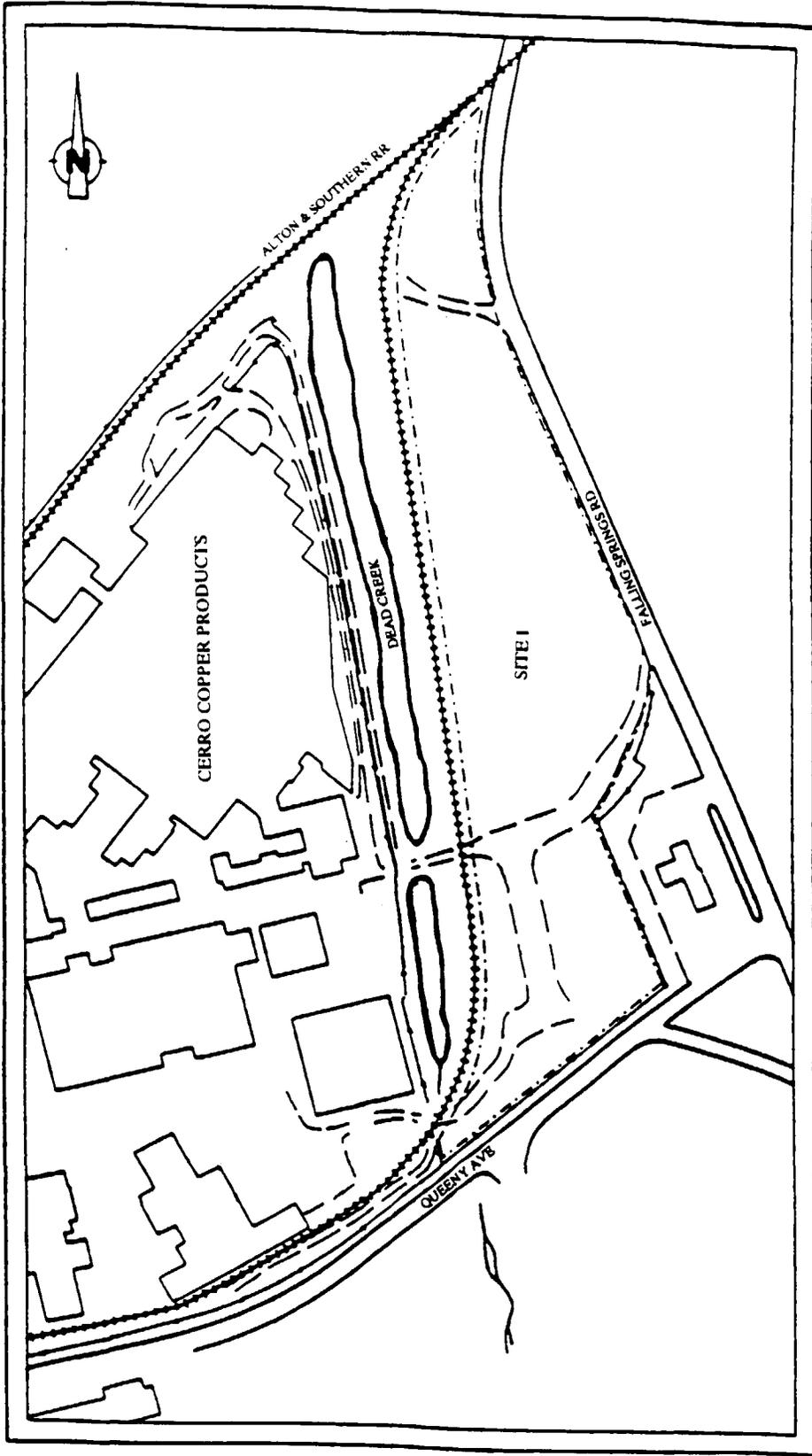
CER 093673

SITE DIAGRAM

CER 093674

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DEAD CREEK SITE AREA I AND CREEK SECTOR A WITH SAMPLING LOCATIONS

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TRAVERSE / ZONE DIAGRAM

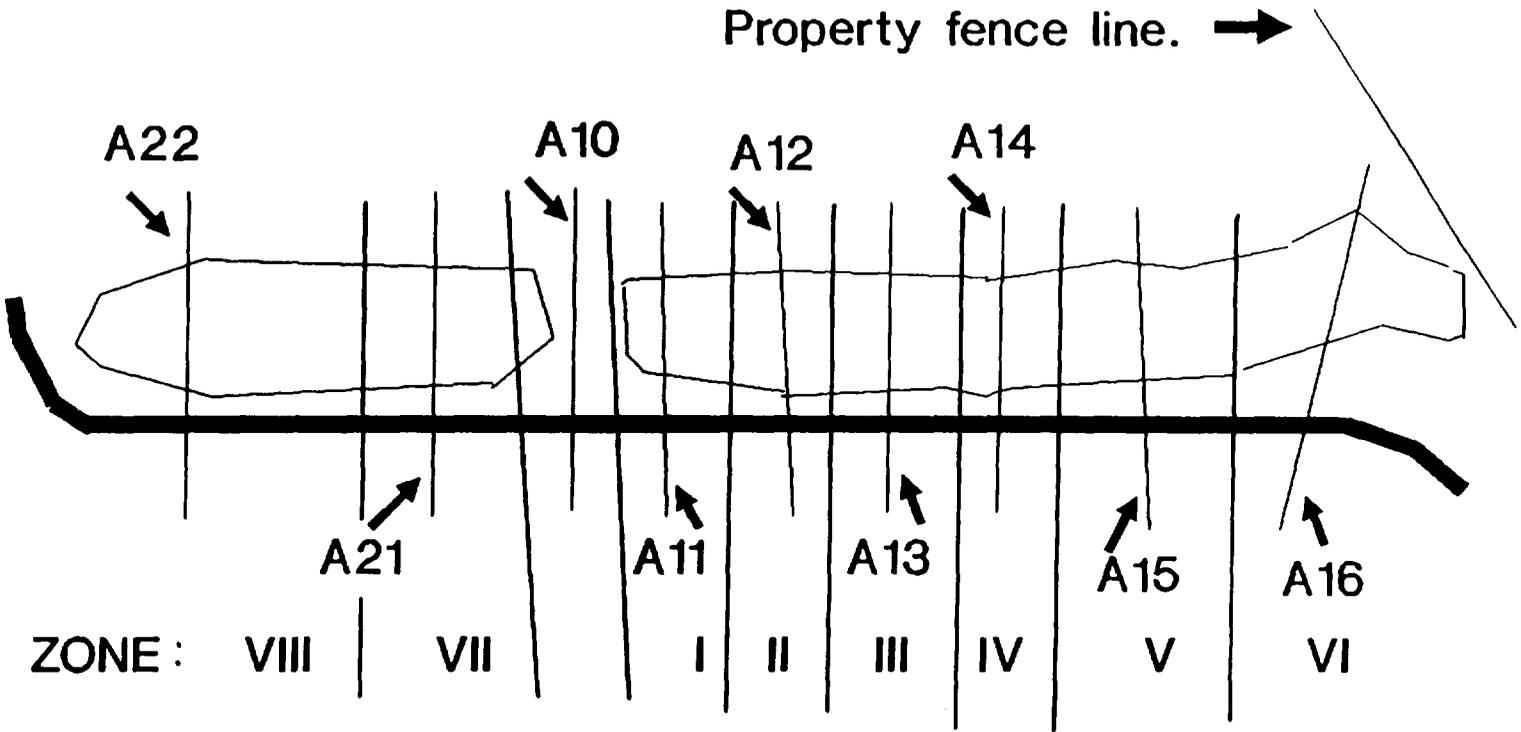
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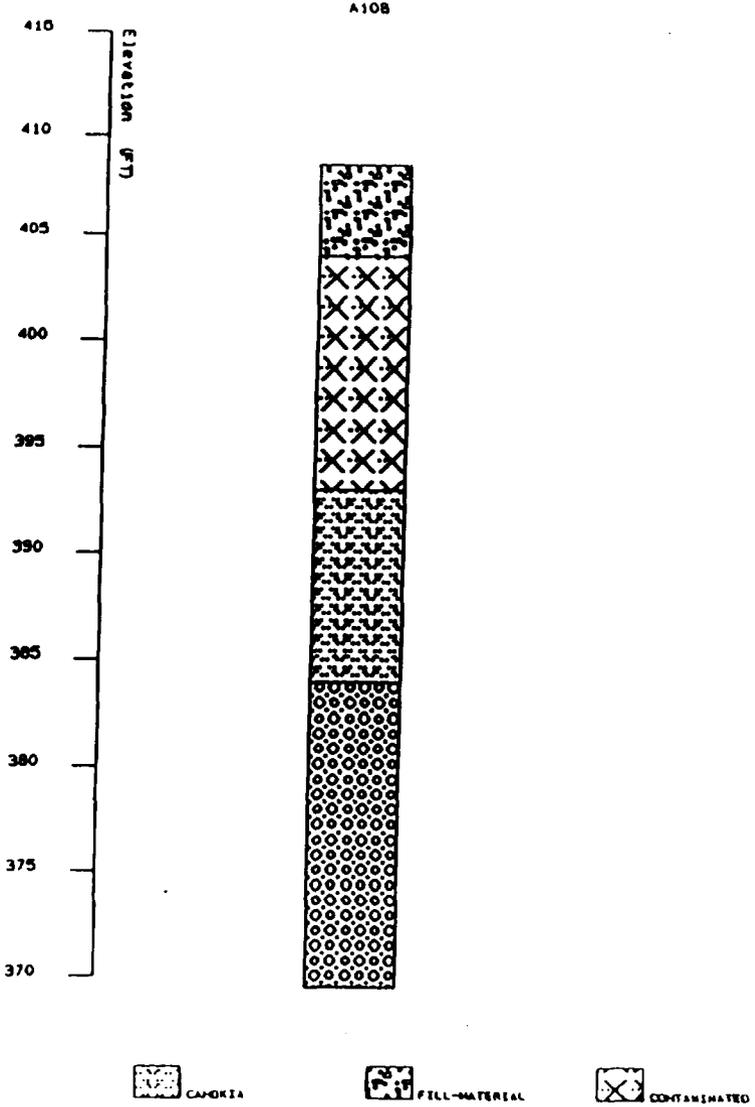
INDIVIDUAL BORING LOGS

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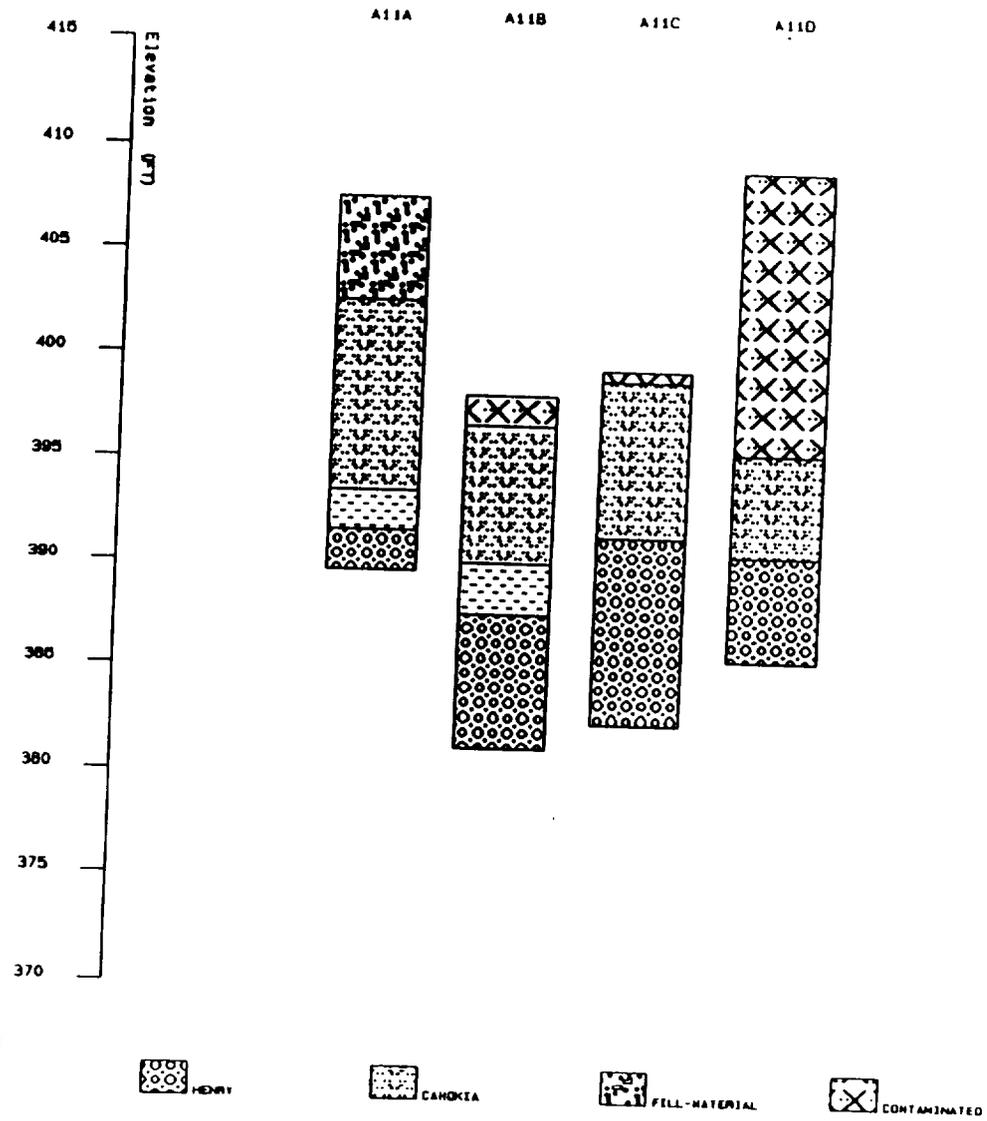
Cerro Copper Products, Sauget, Illinois Boring Logs



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Cerro Copper Products, Sauget, Illinois Boring Logs

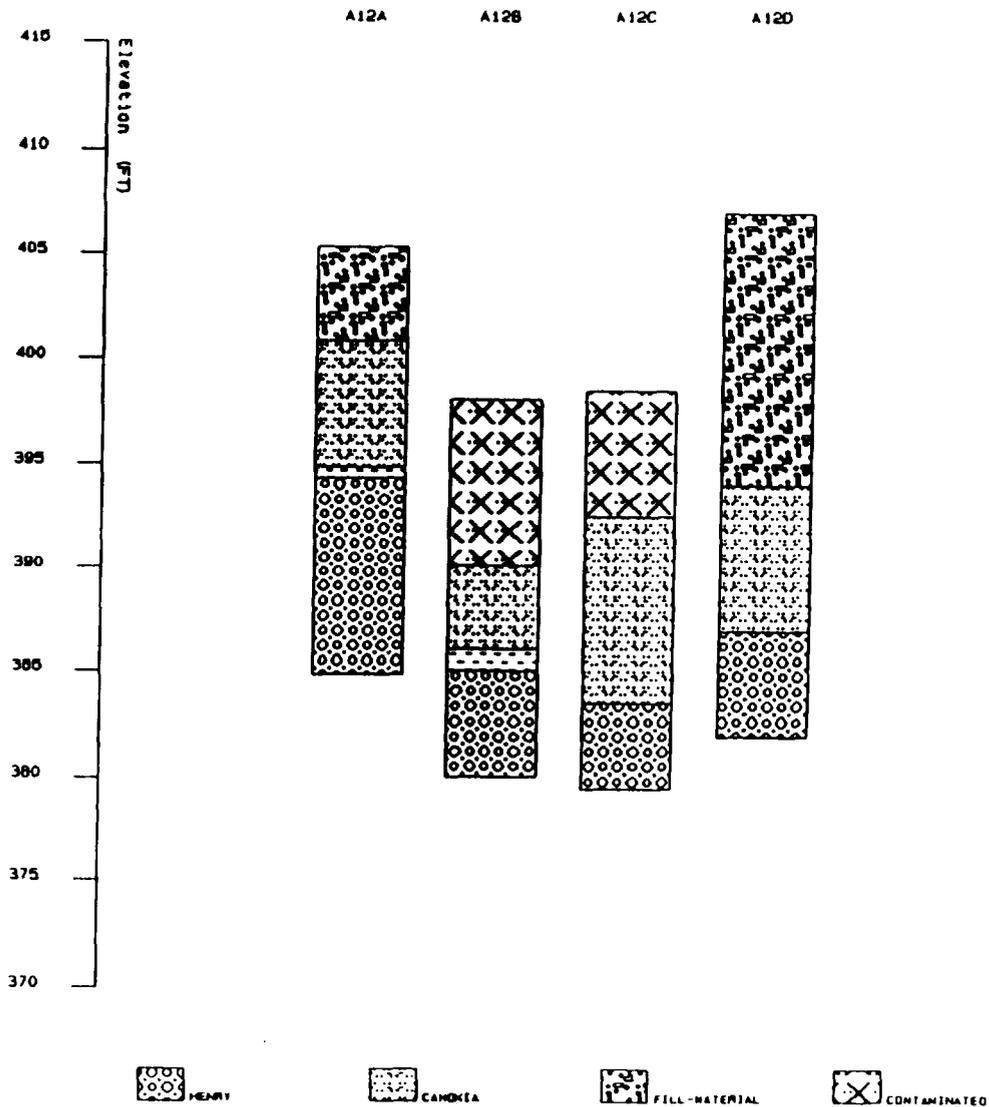


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EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

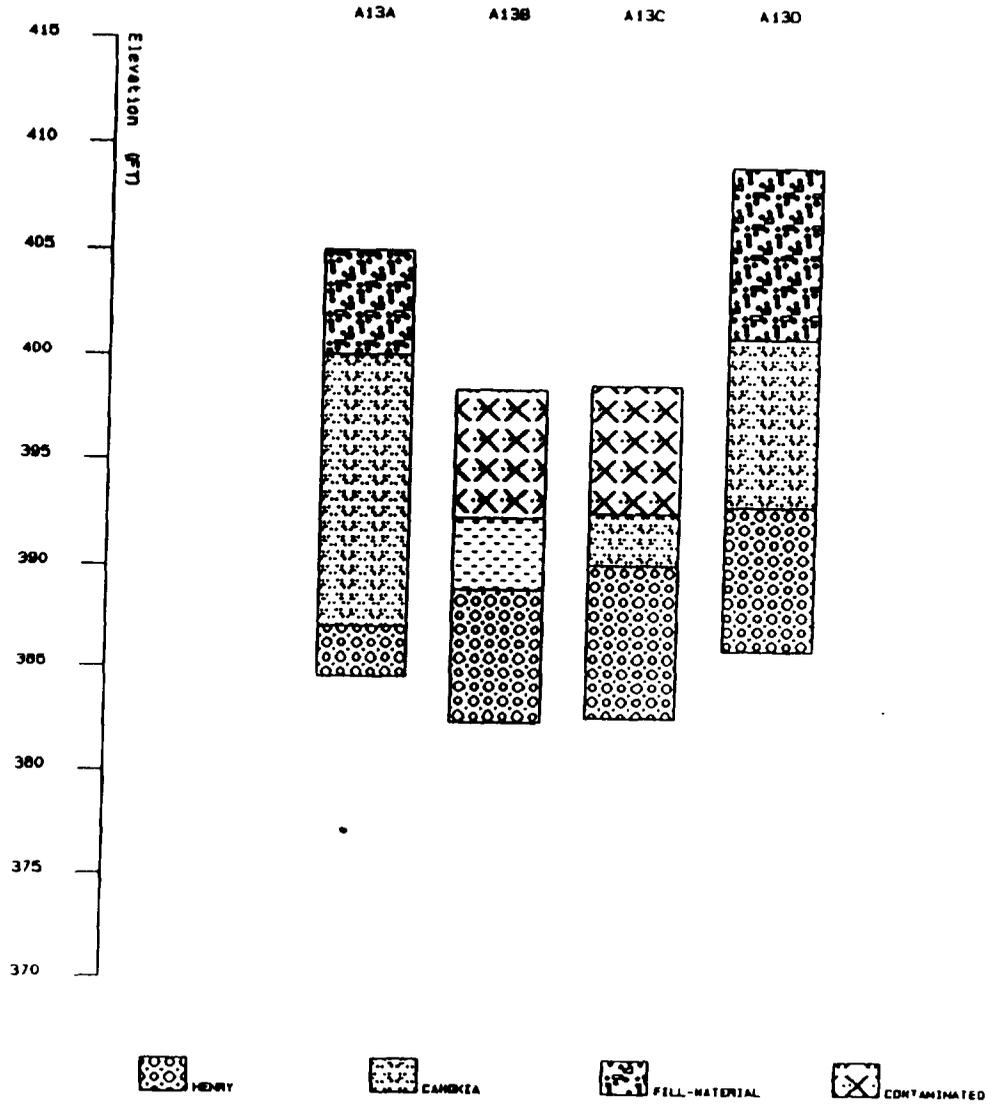
Cerro Copper Products, Sauget, Illinois Boring Logs



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EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

Cerro Copper Products, Sauget, Illinois Boring Logs

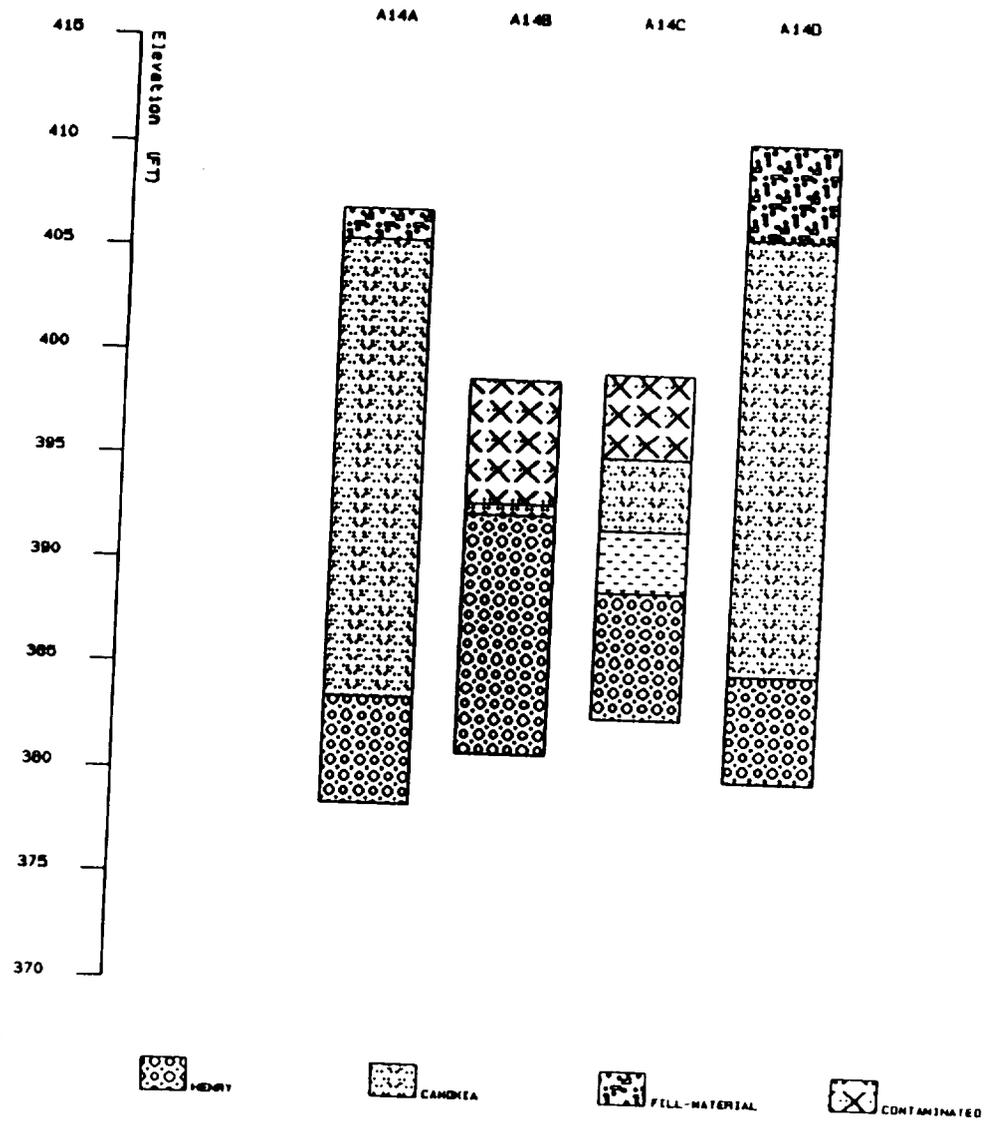


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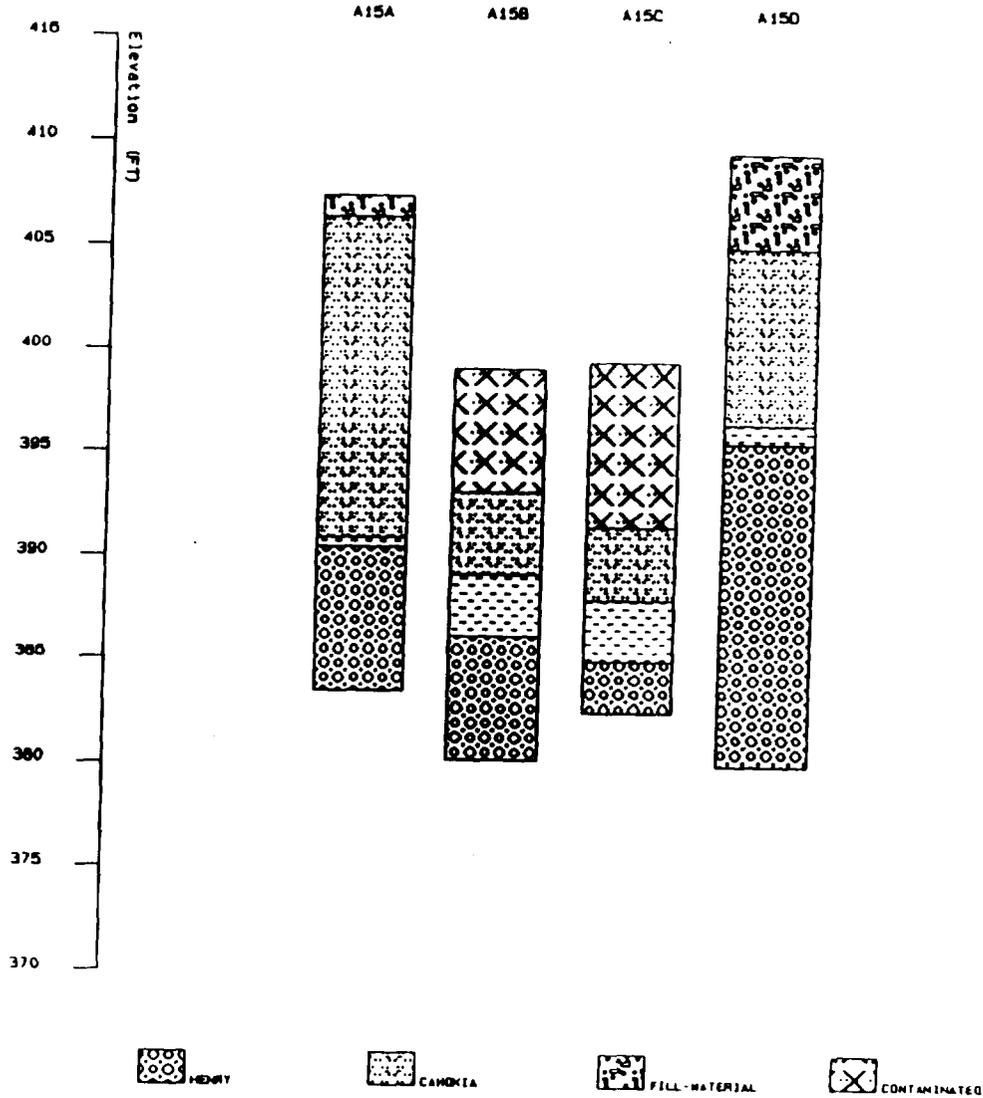
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Cerro Copper Products, Sauget, Illinois Boring Logs



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Cerro Copper Products, Sauget, Illinois Boring Logs

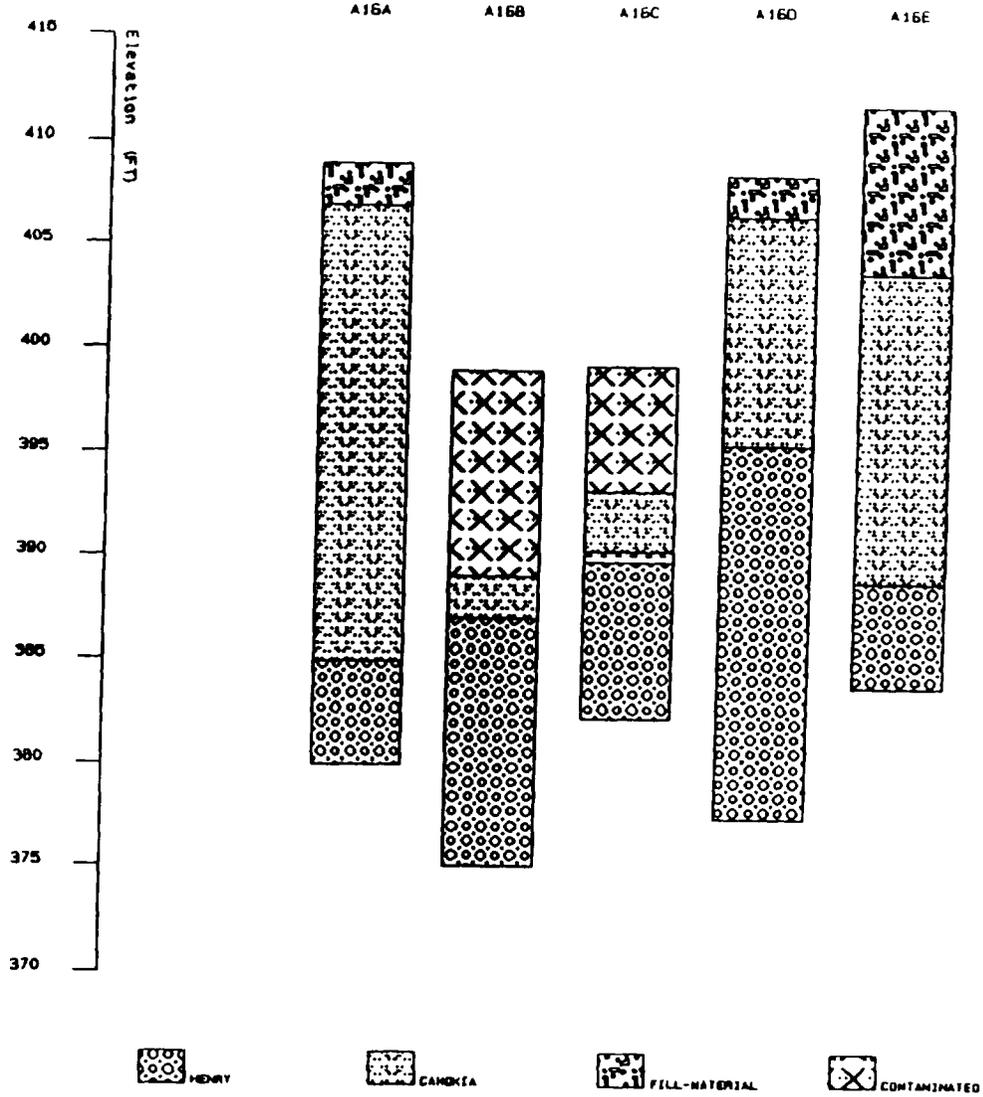


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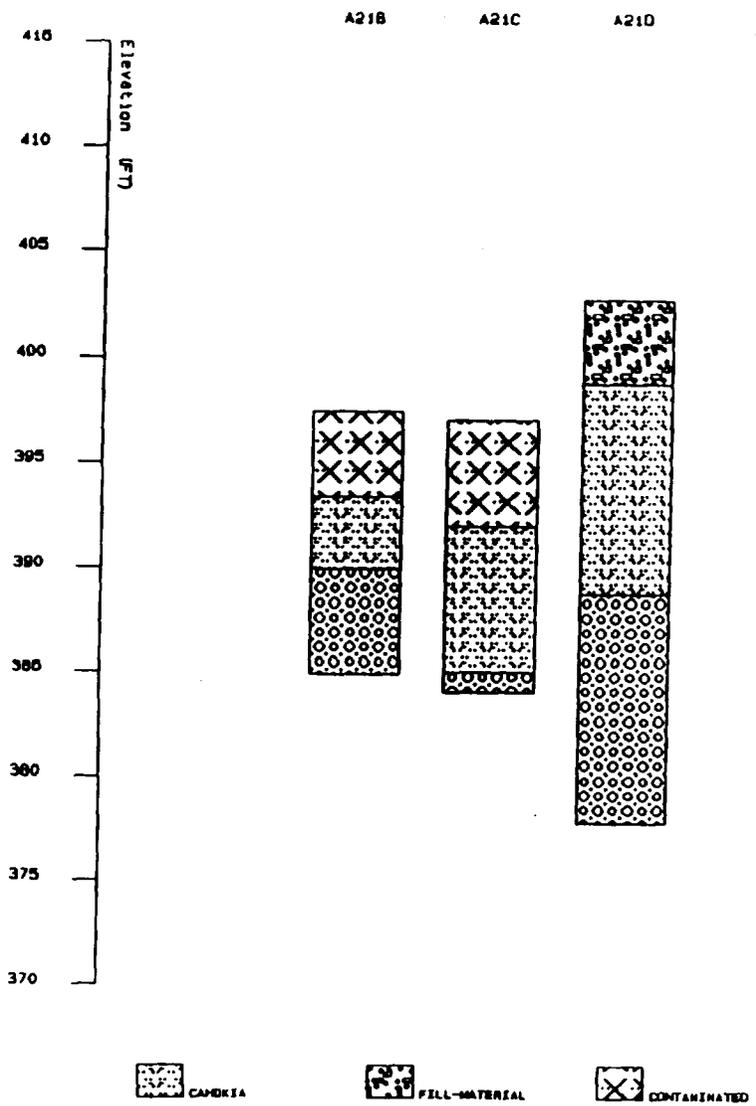


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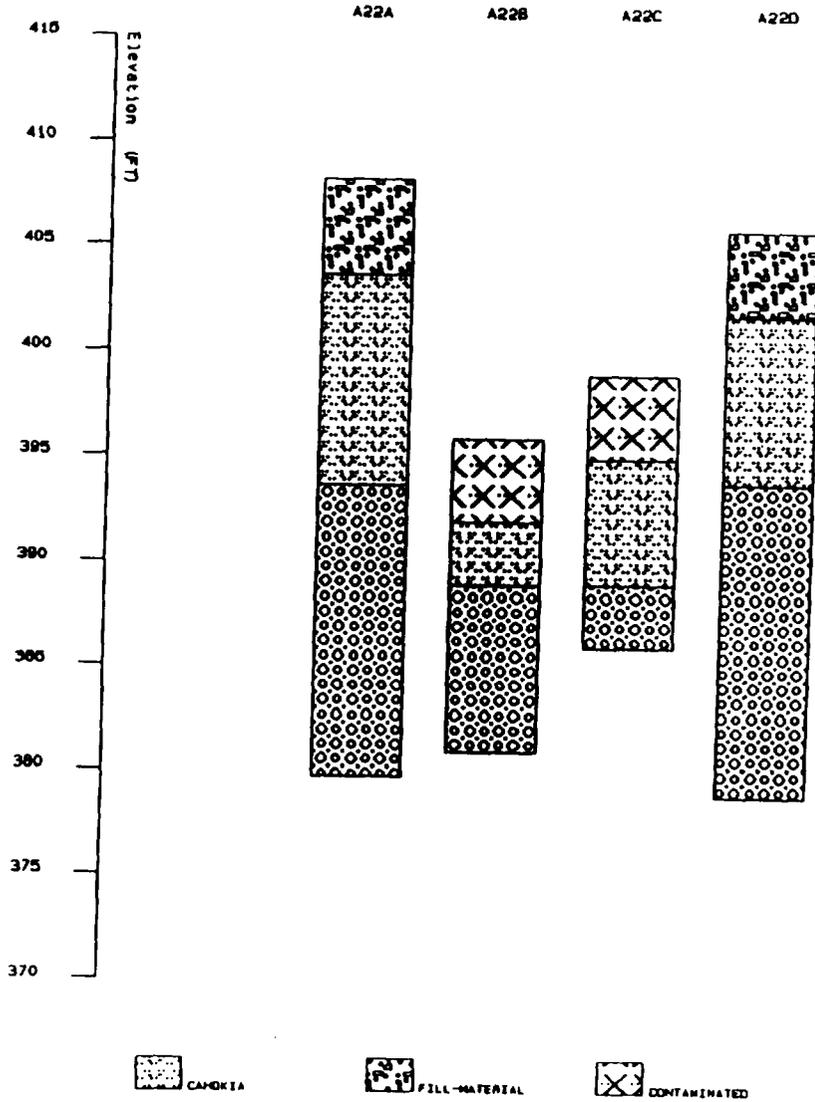


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EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

Cerro Copper Products, Sauget, Illinois Boring Logs

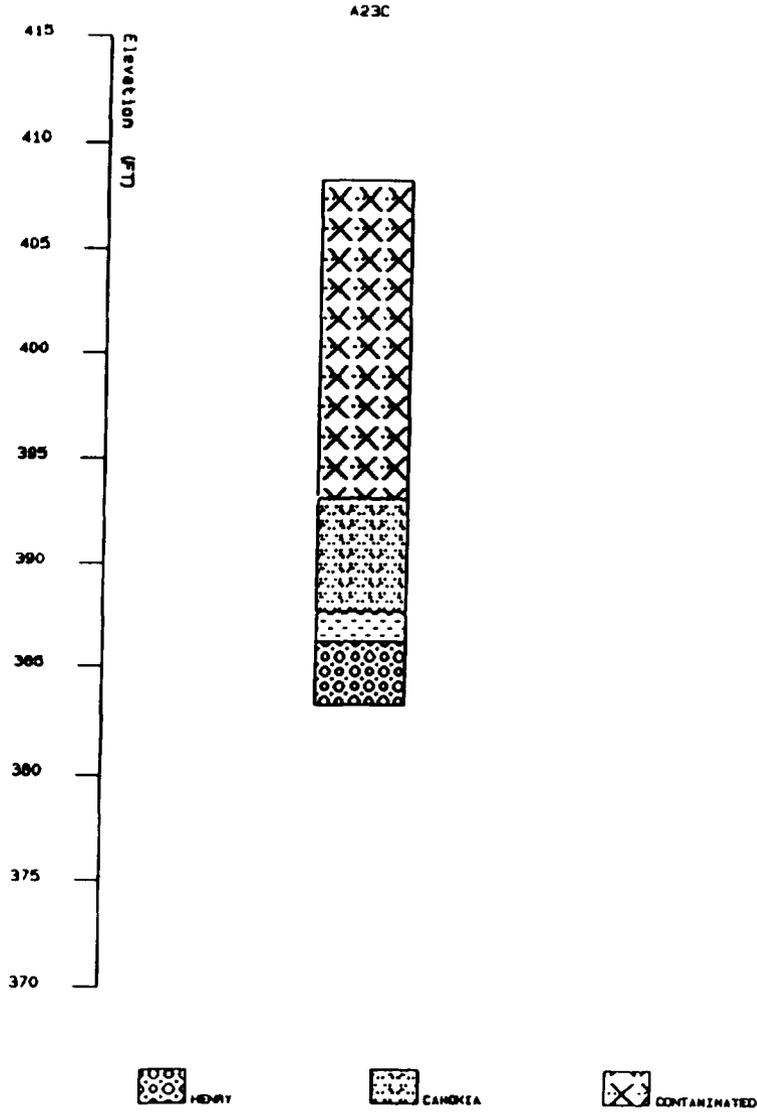


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EPA/CERRO COPPER/ILL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

Cerro Copper Products, Sauget, Illinois Boring Logs



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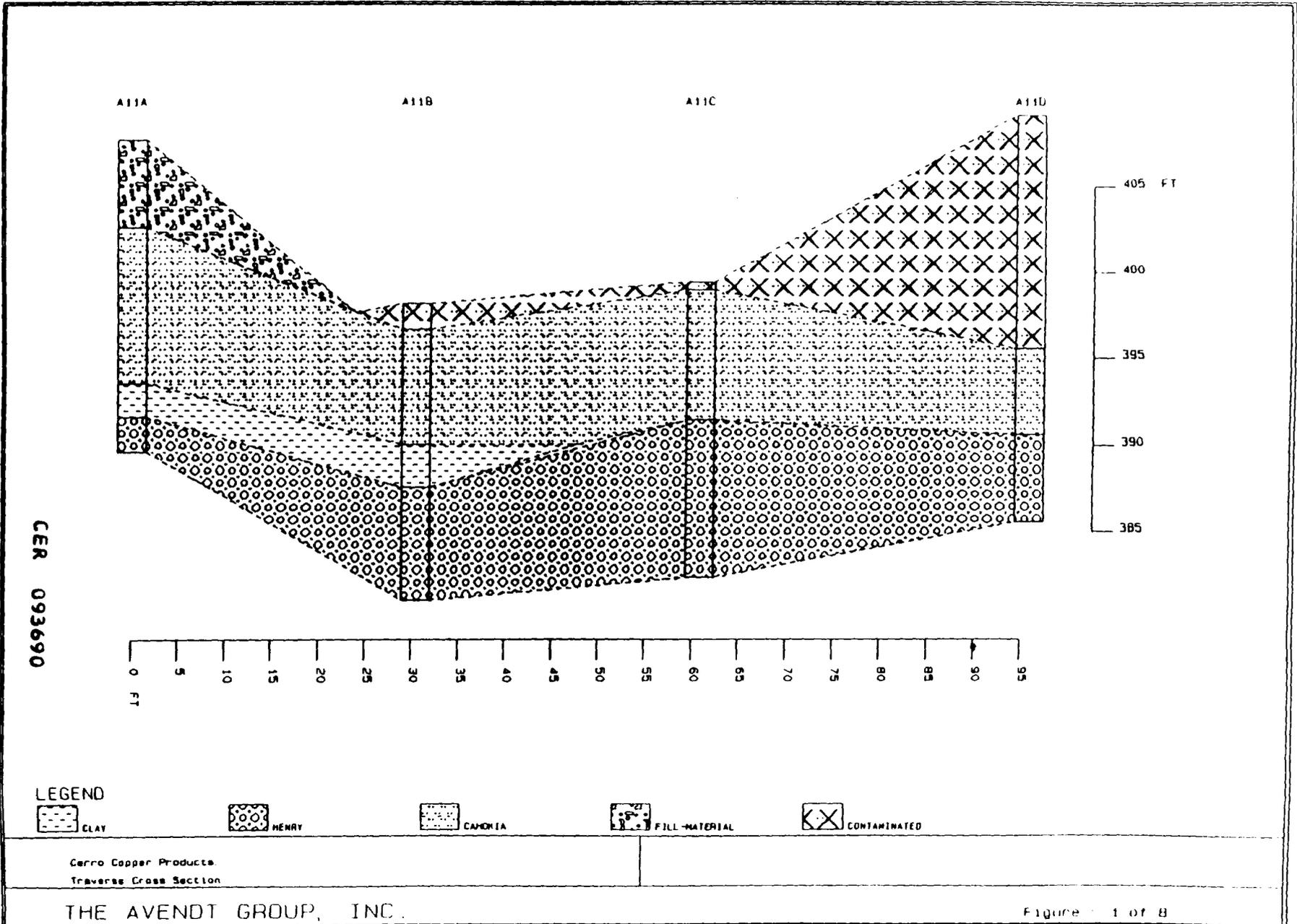
BORING LOGS
TRAVERSE SECTIONS

CER 093689

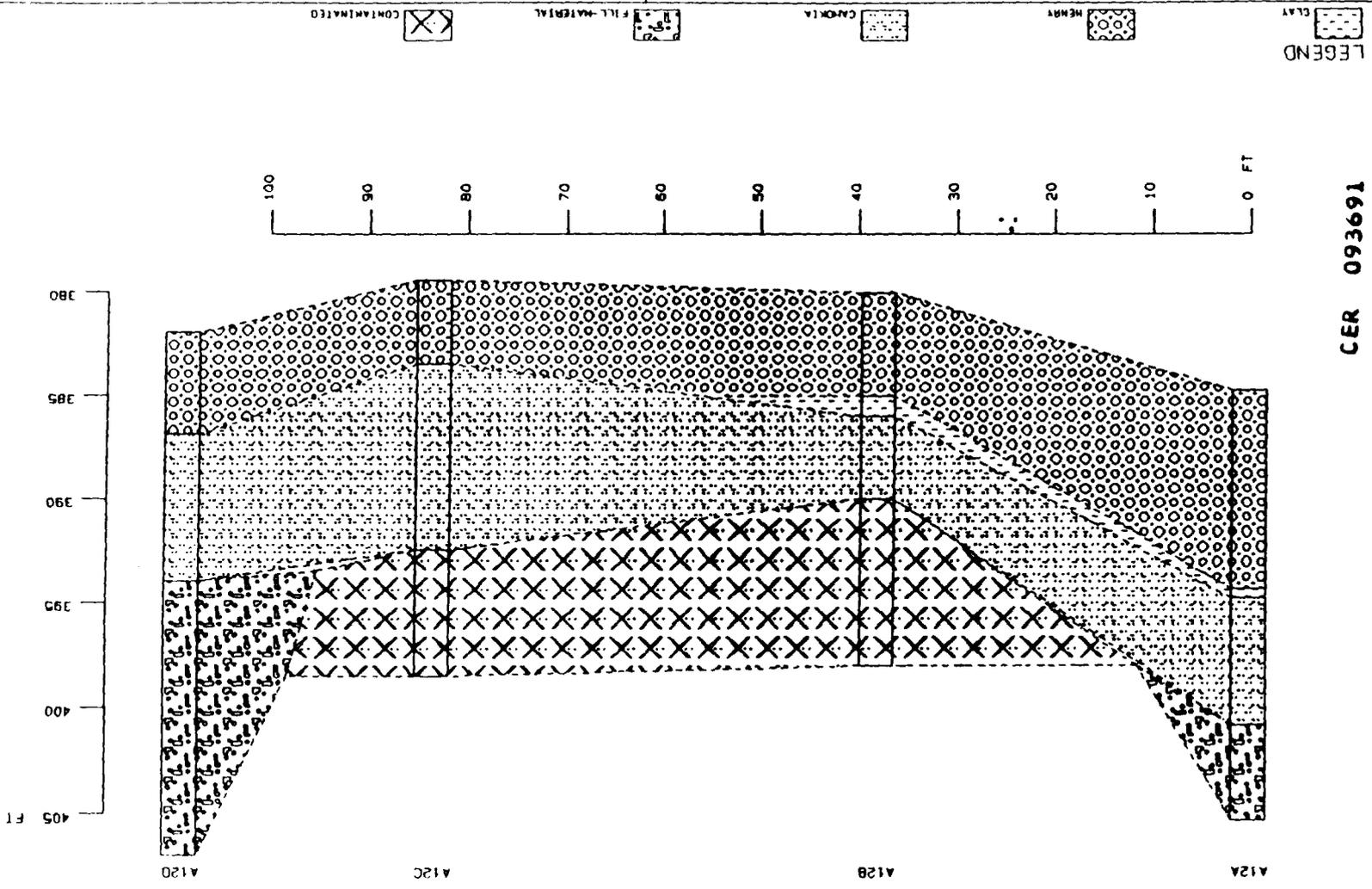
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Cerro Copper Products
Traverse Cross Section

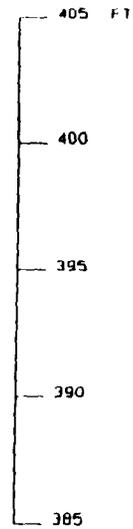
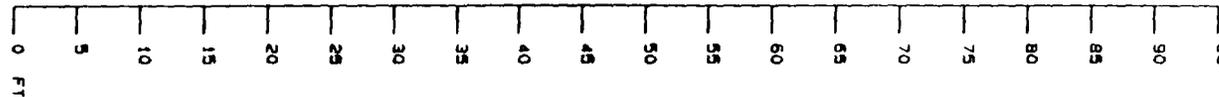
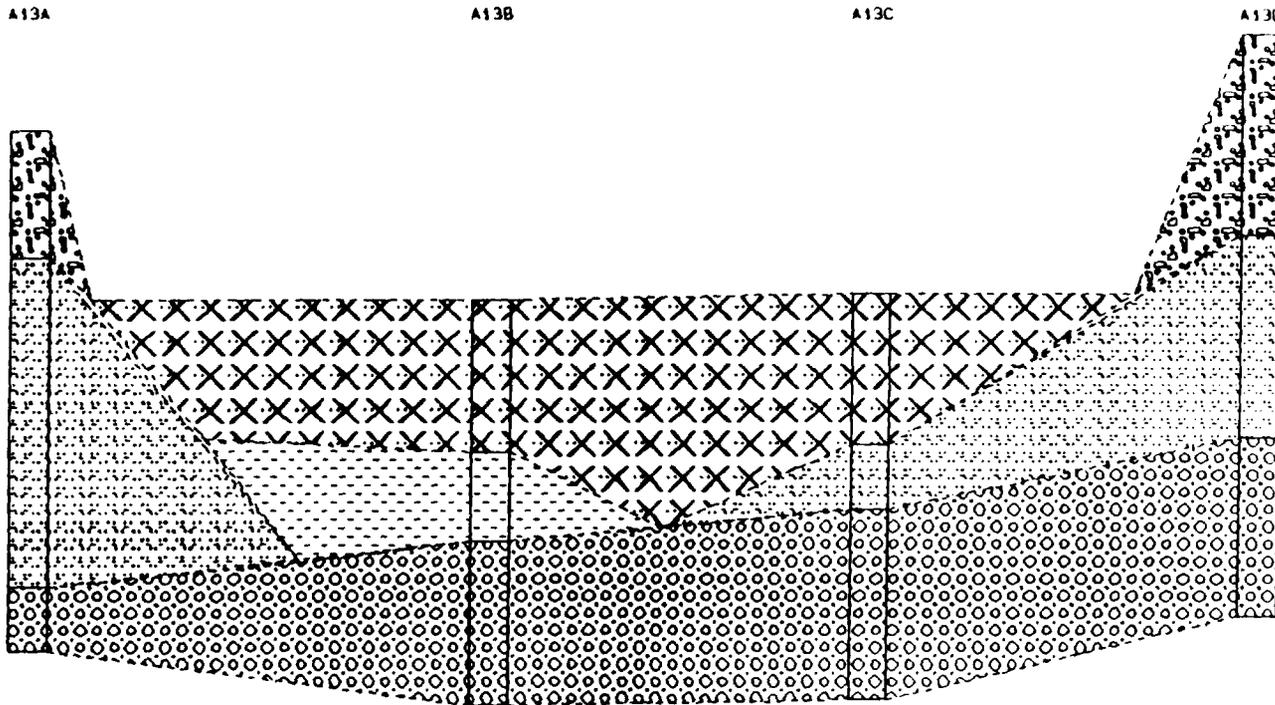


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EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

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CER 093692



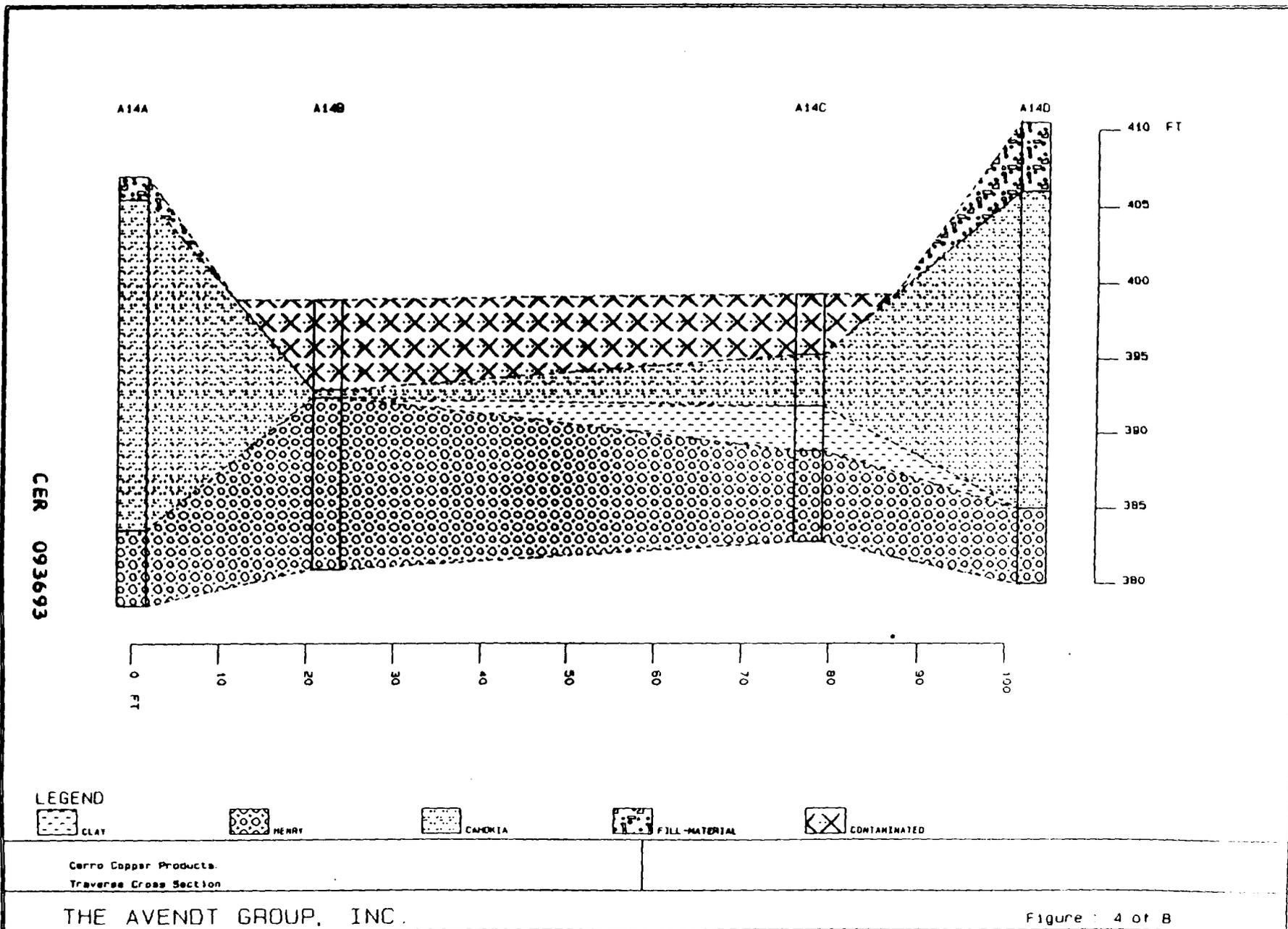
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-  CLAY
-  HENRY
-  CANDLIA
-  FILL MATERIAL
-  CONTAMINATED

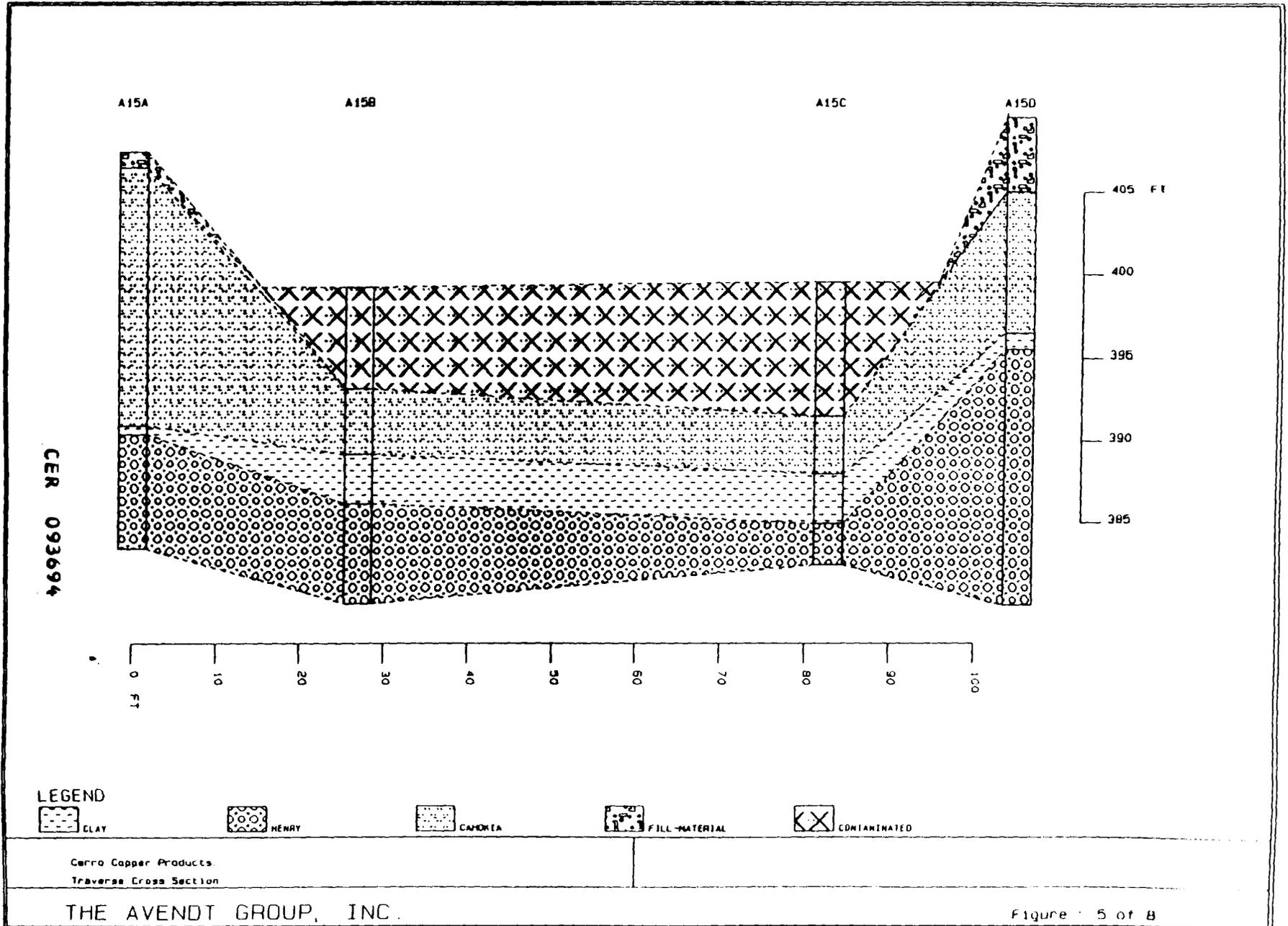
Cerro Copper Products.
Traverse Cross Section

THE AVENOT GROUP, INC.

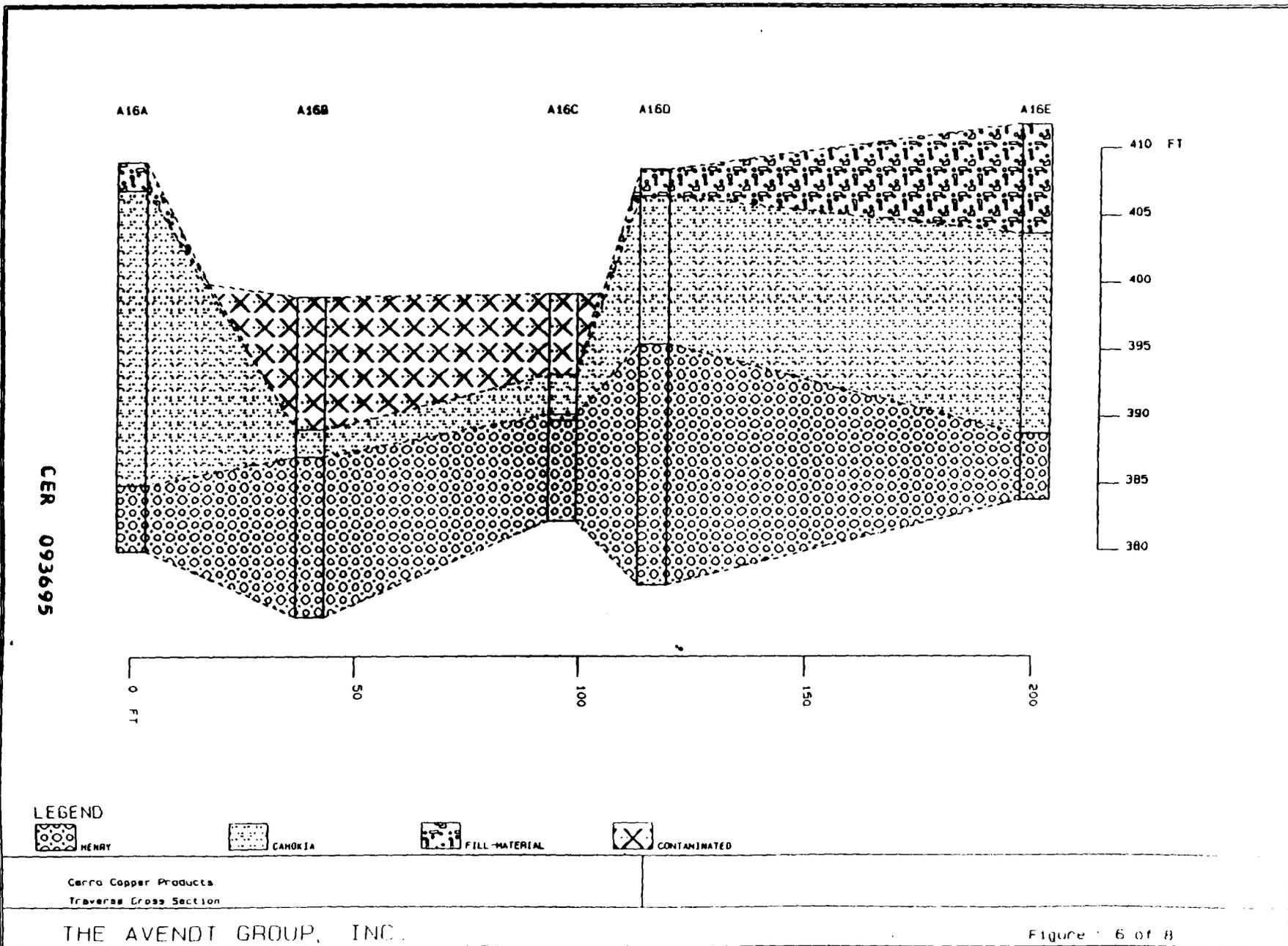
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CONFIDENTIAL 92-CV-204-WDS



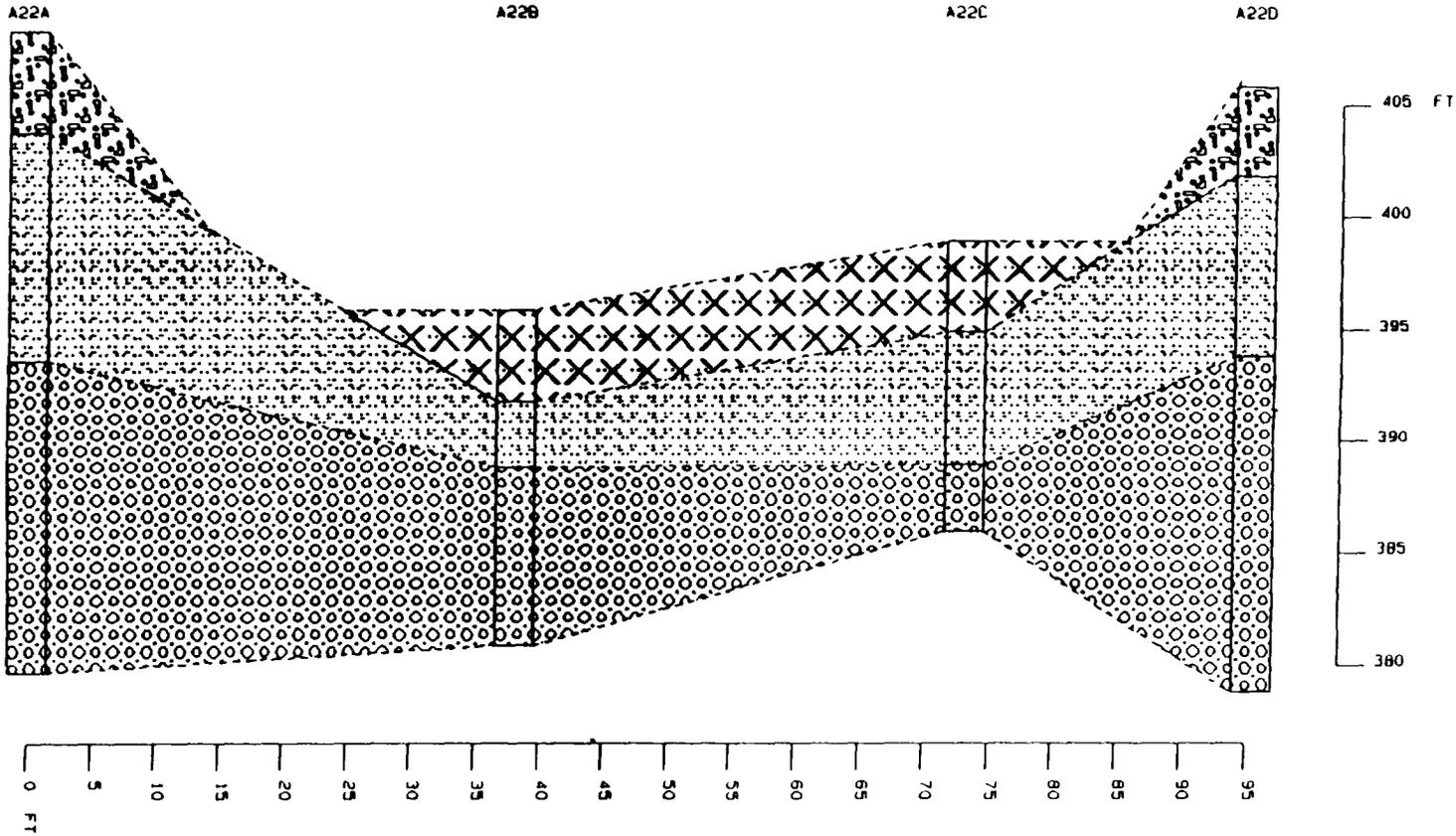
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CER 093695

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CER 093697



LEGEND



HENRY



CAHOZIA



FILL-MATERIAL



CONTAMINATED

Cerro Copper Products
Traverse Cross Section

THE AVENDT GROUP, INC.

BORING LOGS

LONGITUDINAL SECTIONS

1

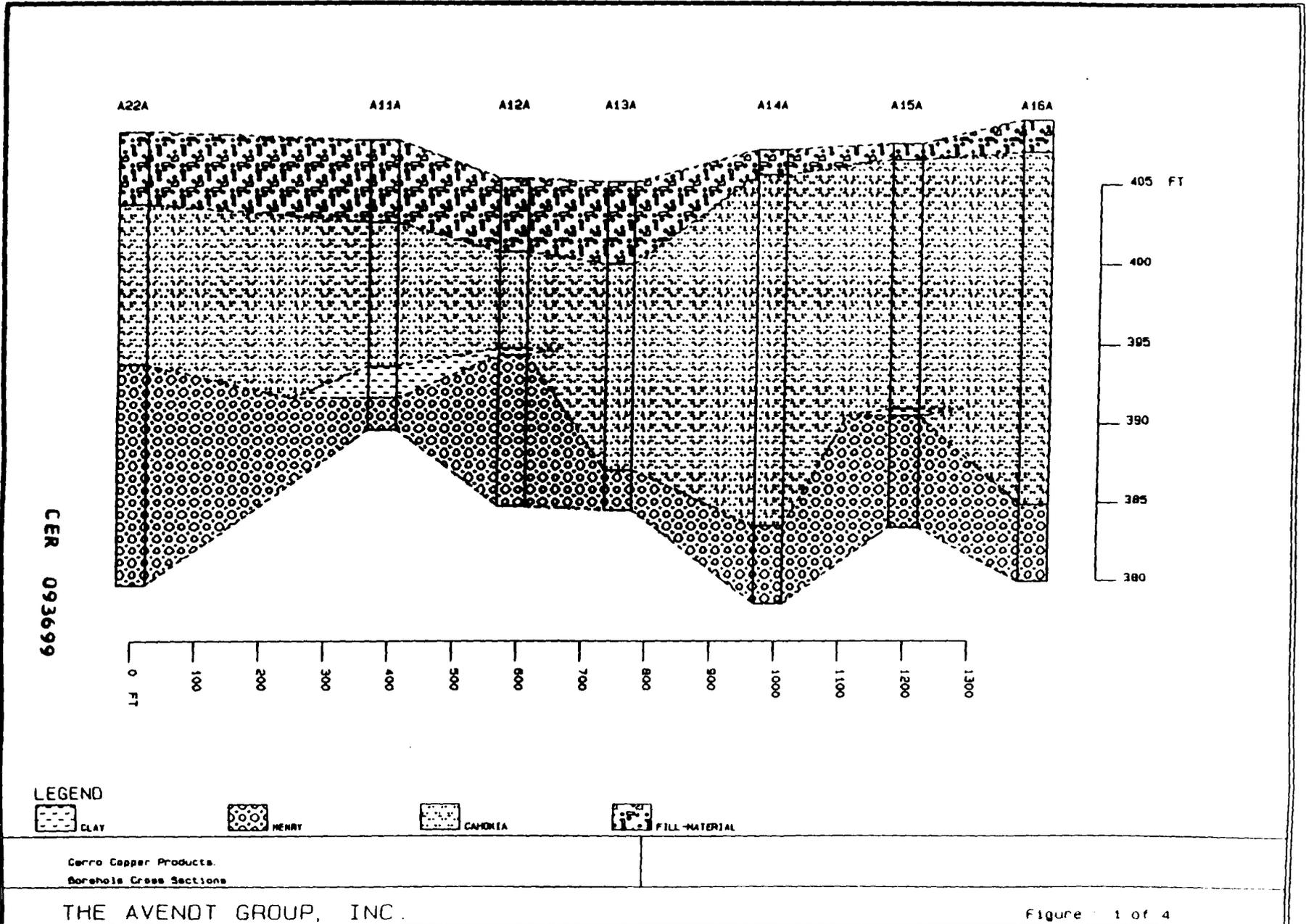


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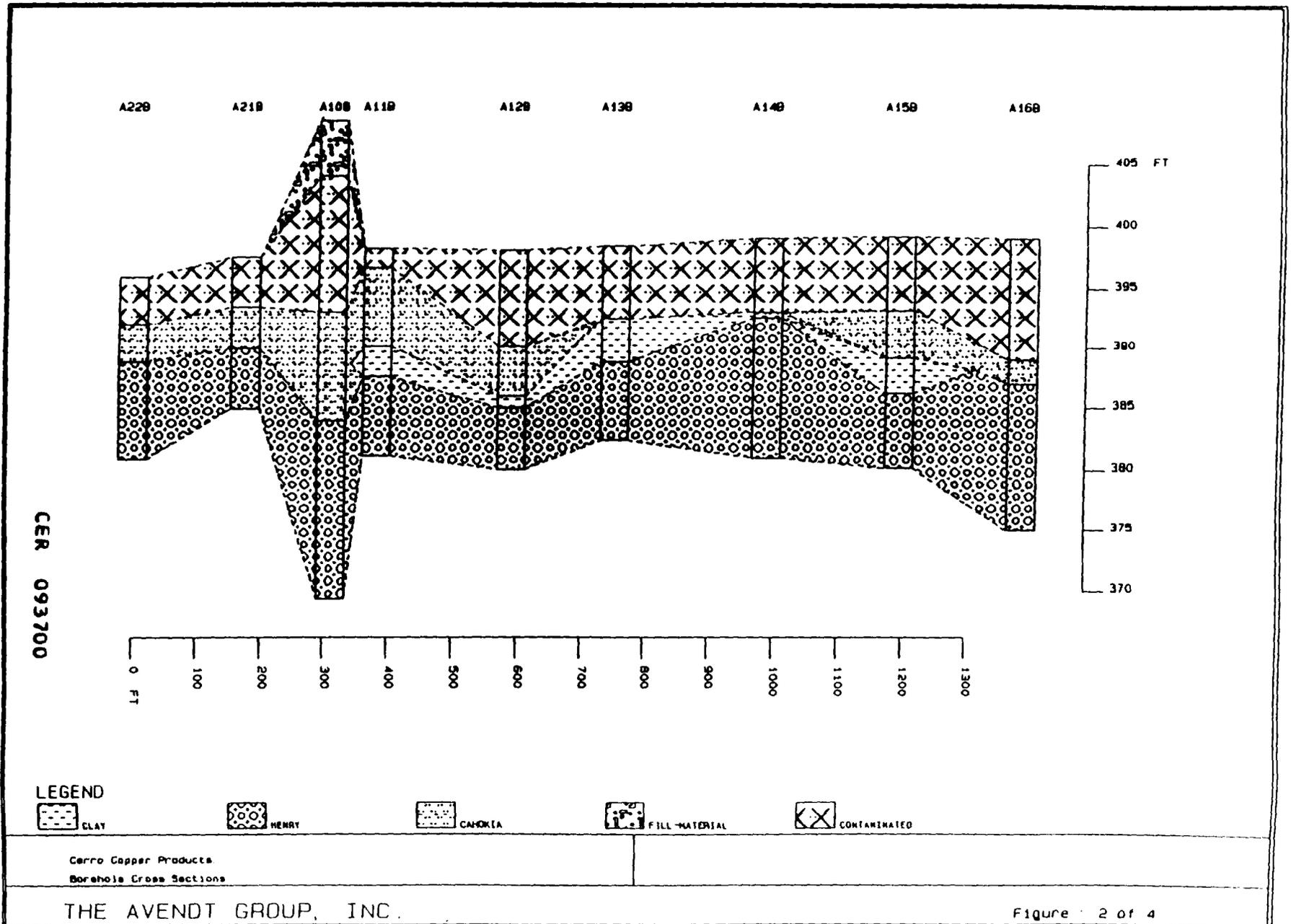
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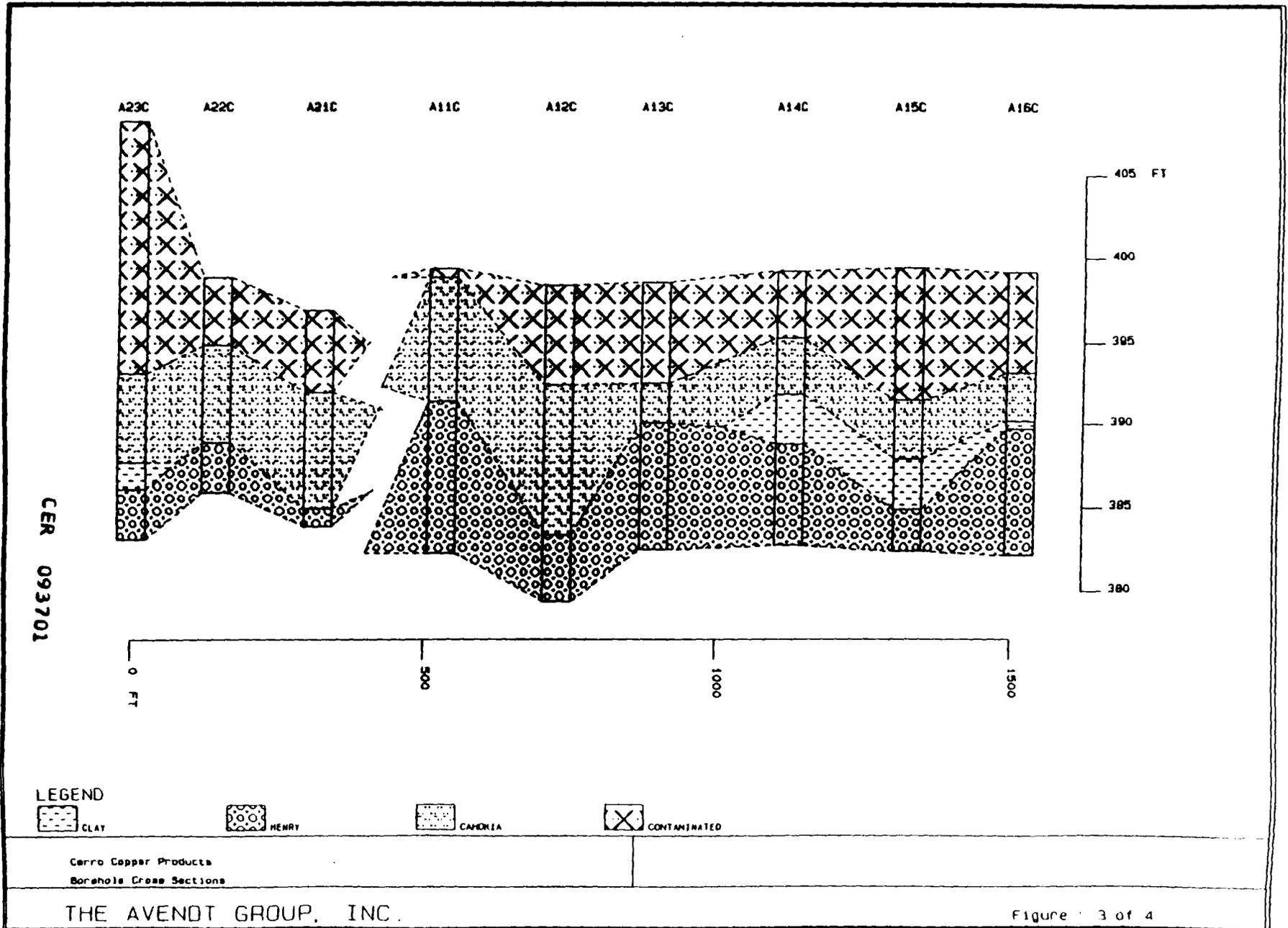
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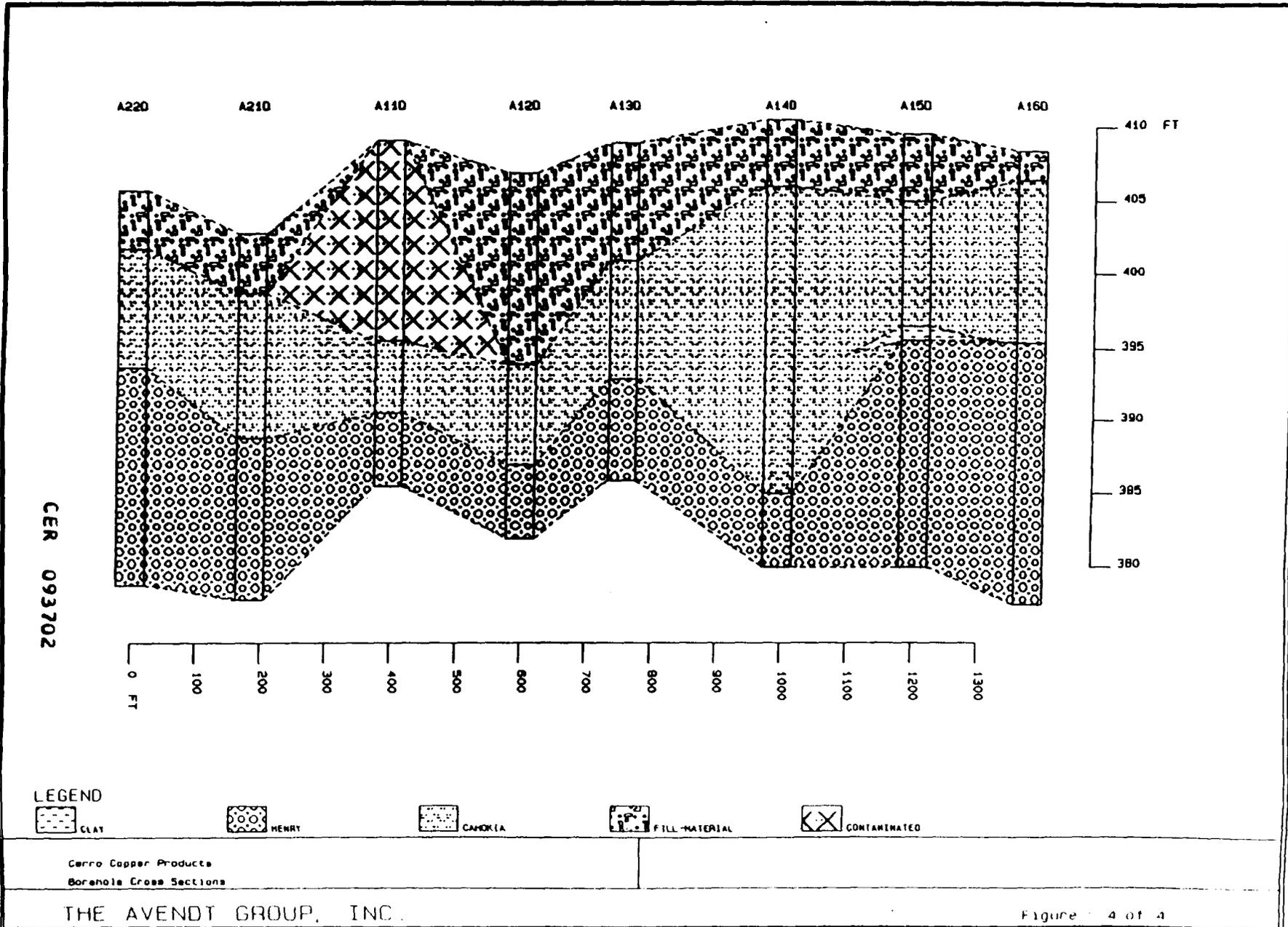
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SEDIMENT VOLUME TABLE

CER 093703

~~CONFIDENTIAL~~ 92-CV-204-1000 2

Cerro Copper Products
Dead Creek
Sediment Volume

Zone	Avg. Dim.	(ft)	Estimated Volume (cu. ft.)	Estimated Volume (cu. yd.)
Zone I	Width :	60		
	Length :	127.	7620	282.2222
	Depth :	1		
Zone II	Width :	66		
	Length :	182	84084	3114.222
	Depth :	7		
Zone III	Width :	61		
	Length :	190	69540	2575.555
	Depth :	6		
Zone IV	Width :	59		
	Length :	223	65785	2436.481
	Depth :	5		
Zone V	Width :	63		
	Length :	201	88641	3283
	Depth :	7		
Zone VI	Width :	67		
	Length :	251	134536	4982.814
	Depth :	8		
Zone VII	Width :	46		
	Length :	156	28704	1063.111
	Depth :	4		
Zone VIII	Width :	54		
	Length :	189	45927	1701
	Depth :	4.5		
Value of Total Creek Sediment.....			524837 cu. ft.	19438.40 cu. y

CER 093704

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SEDIMENT CHARACTERISTICS TABLE

CER 093705

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Cerro Copper Products, Inc.
Creek Sediment

Borehole Depth	% Solids	% Ash
A22B 0-7	72.9	94.7
A22C 3-9	70.4	94.0
A21B 1-6	40.3	80.6
A21C 4-8	23.2	87.7
A12B 3-7	12.2	89
A12C 4-9	55.8	91.7
A13B 4.5-6	32.9	86.1
A13C 4-8.5	41	91.3
A14B 4-8.5	59.9	94.3
A14C 4-8.5	23.1	87.2
A15C 4.5-9	26	85.4
A16B 9-12	23.8	75.3
A16C 2-8	20.2	84.6
Averages	38.56923	87.90769
Standard Deviation:	19.37104	5.521769

CER 093706

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CHEMICAL CHARACTERIZATION

CER 093707

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EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

SAMPLE TESTING SUMMARY

CER 093708

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EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

Cerro Copper Products Sample Testing Summary

SAMPLE ID	DATE	APPENDIX IX	PRE	PCB'S	HSL TOTAL METALS	E.P. METALS	TOXICITY PESTS.	HERBS	FLASH POINT	pH	REACTIVITY CN & SULFIDE
A10B	6-7	7/13/89		XXX	XXX						
A10B	9-10	7/13/89		XXX	XXX						
A10B	15-17	7/13/89	XXX	XXX	***	***	XXX	XXX	XXX	XXX	XXX
A10B	20-22	7/13/89		XXX	XXX						
A10B	24-29	7/13/89		XXX	XXX						
A10B	37-38	7/13/89		XXX	XXX						
A11A	8-13	7/19/89		XXX	XXX	XXX	XXX	XXX			
A11A	13-18	7/19/89		XXX	XXX						
A11B	4-8	7/18/89	XXX	XXX	***	***	XXX	XXX	XXX	XXX	XXX
A11B	8.1-10.6	7/18/89		XXX	XXX						
A11B	12-17	7/18/89		XXX	XXX						
A11C	2-6/5	7/18/89	XXX	XXX	***	***	XXX	XXX	XXX	XXX	XXX
A11C	6.5-10.5	7/18/89		XXX	XXX						
A11C	12.5-16.5	7/18/89		XXX	XXX						
A11D	8-10	7/18/89		XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
A11D	18.5-23.5	7/18/89		XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
A12A	8-11	7/19/89		XXX	XXX	XXX	XXX	XXX			
A12A	11-20.5	7/19/89		XXX	XXX						
A12B	3-7	7/13/89	XXX	XXX	***	***	XXX		XXX	XXX	XXX
A12B	9-12	7/13/89		XXX	XXX						
A12B	14-17	7/13/89		XXX	XXX						

CER 093709

The Avendt Group, Inc.

CONFIDENTIAL 92-CV-204-WDS

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

SAMPLE ID	DATE	APPENDIX IX	PRE	PCB'S	HSL TOTAL METALS	E.P. METALS	TOXICITY PESTS.	HERBS	FLASH POINT	pH	REACTIVITY CN & SULFIDE
A12B	17-19	7/13/89	XXX	XXX							
A12C	14-16	7/12/89		XXX		XXX					
A12C	10-13	7/12/89		XXX		XXX					
A12C	4-9	7/12/89	XXX	***	***	XXX	XXX	XXX	XXX	XXX	XXX
A12D	6-13	7/18/89	XXX	XXX							
A12D	17-20	7/18/89	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
A12D	20-25	7/18/89	XXX	XXX							
A13A	9-14	7/20/89	XXX	XXX		XXX	XXX	XXX			
A13A	14-19	7/20/89	XXX	XXX							
A13A	19-20.5	7/20/89	XXX	XXX							
A13B	4.5-6.0	7/11/89	XXX	***	***	XXX	XXX	XXX	XXX	XXX	XXX
A13B	6-9.5	7/11/89		XXX							
A13B	9.5-12	7/11/89		XXX							
A13C	13-16	7/12/89		XXX		XXX					
A13C	6-13	7/12/89		XXX		XXX					
A13C	4-8.5	7/12/89		XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
A13D	18-23	7/19/89	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
A14A	4-9	7/20/89	XXX	XXX	XXX	XXX	XXX	XXX			
A14A	13.5-23.5	7/20/89	XXX	XXX							
A14A	23.5-28.5	7/20/89	XXX	XXX							
A14B	4-8.5	7/11/89		XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
A14B	8.5-13	7/11/89		XXX							

CER 093710

The Avendt Group, Inc.

CONFIDENTIAL 92-CV-204-WDS

EPA/CEPRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

SAMPLE ID	DATE	APPENDIX IX	PRE	PCB'S	HSL TOTAL METALS	E.P. TOXICITY			FLASH POINT	pH	REACTIVITY CN & SULFIDE
						METALS	PESTS.	HERBS			
A14C	4-8.5			XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
A14C	8.5-10.5	7/11/89	XXX	...	...				
A14C	13.5-16.5	7/11/89		XXX							
A14C	9-14	7/11/89		XXX		XXX					
A14D	10-14	7/12/89		XXX	XXX	XXX			XXX	XXX	XXX
A14D	15-19	7/12/89		XXX							
A14D	24-29	7/12/89		XXX							
A15A	9-14	7/20/89	XXX	XXX		XXX	XXX	XXX			
A15A	14-19	7/20/89	XXX	XXX							
A15A	19-24	7/20/89	XXX	XXX							
A15B	6-9	7/7/89	XXX	...	...	XXX			XXX	XXX	XXX
A15B	13-16	7/7/89		XXX	XXX	XXX	XXX	XXX			
A15B	16-19	7/7/89		XXX							
A15C	4.5-9	7/7/89	XXX	...	...	XXX	XXX	XXX	XXX	XXX	XXX
A15C	9.5-14.5	7/10/89		XXX							
A15C	14.5-17.5	7/10/89		XXX							
A15D	4-9	7/12/89		XXX	XXX	XXX			XXX	XXX	XXX
A15D	12-14	7/2/89		XXX							
A15D	19-24	7/12/89		XXX							
A15D	24-29	7/12/89		XXX							
A16A	9-14	7/20/89	XXX	XXX		XXX	XXX	XXX			
A16A	14-19	7/20/89	XXX	XXX							

CER 093711

The Avendt Group, Inc.

CONFIDENTIAL 92-CV-204-WDS

EPA/CEPRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

SAMPLE ID	DATE	APPENDIX IX	PRE	PCB'S	HSL TOTAL METALS	E.P. TOXICITY			FLASH POINT	pH	REACTIVITY CN & SULFIDE
						METALS	PESTS.	HERBS			
A16A	24-29	7/20/89	XXX	XXX							
A16B	9-12	7/18/89	XXX	XXX	***	***	XXX	XXX	XXX	XXX	XXX
A16B	14-19	7/18/89	XXX	XXX							
A16C	2-5	7/18/89	XXX	XXX	***	***	XXX	XXX	XXX	XXX	XXX
A16C	7-12	7/18/89	XXX	XXX							
A16C	12-17	7/18/89	XXX	XXX							
A16D	13-18	7/20/89	XXX	XXX							
A16D	18-23	7/20/89	XXX	XXX							
A16D	23-31	7/20/89	XXX	XXX							
A16E	13-18	7/20/89	XXX	XXX			XXX	XXX	XXX		
A16E	18-23	7/20/89	XXX	XXX							
A16E	25.5-28	7/20/89	XXX	XXX							
A21B	1-6	7/17/89	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
A21B	6-10	7/17/89	XXX	XXX							
A21B	10-13	7/17/89	XXX	XXX							
A21C	4-8	7/14/89	XXX	XXX	***	***	XXX	XXX	XXX	XXX	XXX
A21C	8-11	7/14/89	XXX	XXX							
A21C	13-14.5	7/14/89	XXX	XXX							
A21D	4-9	7/10/89		XXX							
A21D	9-14	7/10/89		XXX							
A21D	14-19	7/10/89		XXX	XXX	XXX	XXX	XXX			
A22A	19-22	7/11/89		XXX							

CER 093712

The Avendt Group, Inc.

CONFIDENTIAL 92-CV-204-WDS

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

SAMPLE ID	DATE	APPENDIX IX	PRE	PCB'S	HSL TOTAL METALS	E.P. TOXICITY			FLASH POINT	pH	REACTIVITY CN & SULFIDE
						METALS	PESTS	HERBS			
A22A	24-28	7/11/89		XXX							
A22B	0-7	7/17/89	XXX	XXX	***	***	XXX	XXX	XXX	XXX	XXX
A22B	7-13	7/17/89		XXX	XXX						
A22C	3-9	7/17/89		XXX	XXX	XXX	XXX	XXX	XXX	XXX	XXX
A22C	10-15	7/17/89		XXX	XXX						
A22D	4-9	7/11/89		XXX							
A22D	9-14	7/11/89		XXX							
A22D	24-27	7/11/89		XXX							
A23C	12-13	7/14/89		XXX	XXX						
A23C	13-19	7/14/89		XXX	XXX						
A23C	19-20	7/14/89	XXX	XXX	***	***	XXX	XXX	XXX	XXX	XXX
A23C	21-23	7/14/89		XXX	XXX						

*** Included in the Appendix IX Parameter Lists

CER 093713

The Avendt Group, Inc.

CONFIDENTIAL 92-CV-204-WDS

EPA/CEPRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

PCB DATA

CER 093714

CONFIDENTIAL 92-CV-304-WDS

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

PCBs by GC

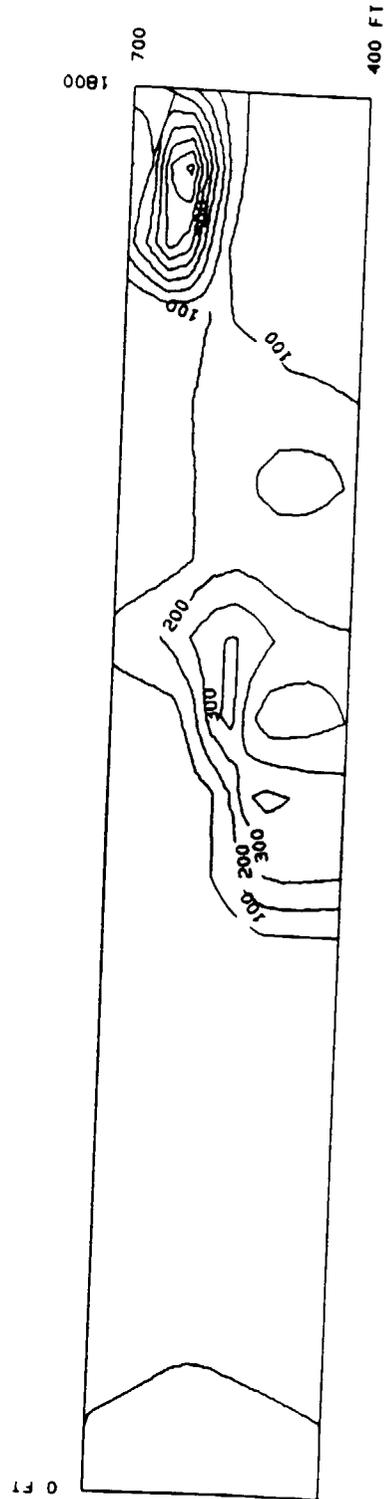
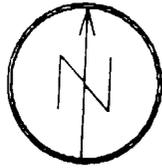
Parameters :		Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260
Sample I.D.	Date							
A10	6-7	07/13	ND	ND	ND	ND	ND	ND
A10	15-17		ND	ND	ND	ND	480	ND
A10	24-29	07/13	ND	10000	ND	ND	ND	ND
A10	37-38	07/13	ND	3200	ND	ND	ND	ND
A11B	4-8		ND	ND	ND	ND	530	ND
A11C	2-6.5		ND	ND	45000	ND	10000	ND
A12B	3-7		ND	ND	32000	ND	BDL	ND
A12B	9-12	07/13	ND	13000	ND	ND	ND	ND
A12B	14-17	07/13	ND	ND	ND	ND	ND	ND
A12B	17-19	07/13	ND	ND	ND	ND	270	ND
A12C	4-9		ND	ND	ND	ND	BDL	ND
A12C	10-13	07/12	ND	ND	ND	ND	ND	ND
A12C	14-16	07/12	ND	ND	ND	ND	ND	ND
A13B	4.5-6		ND	ND	340000	ND	ND	ND
A13B	6-9.5	07/11	ND	ND	32000	ND	100000	ND
A13B	9.5-12	07/11	ND	ND	ND	ND	18000	ND
A13C	4-8.5	07/12	ND	780000	ND	ND	350	ND
A13C	6-13	07/12	ND	20000	ND	ND	120000	ND
A13C	13-16	07/12	ND	ND	ND	ND	5500	ND
A14B	4-8.5	07/11	ND	100000	ND	ND	ND	ND
A14B	8.5-13	07/11	ND	5200	ND	ND	14000	ND
A14C	4-8.5	07/11	ND	190000	ND	ND	1100	ND
A14C	8.5-10.5		ND	ND	1700	ND	250000	ND
A14C	13.5-16.5	07/11	ND	5200	ND	ND	520	ND
A14D	10-14	07/12	ND	ND	ND	ND	1000	ND
A14D	15-19	07/12	ND	ND	ND	ND	ND	ND
A14D	24-29	07/12	ND	ND	ND	ND	ND	ND
A15B	6-9		ND	ND	3700	ND	BDL	ND
A15B	13-16	07/07	ND	ND	7200	ND	1800	ND
A15B	16-19	07/07	ND	ND	ND	ND	ND	ND
A15C	4.5-9		ND	ND	300000	ND	68000	ND
A15C	9.5-14.5	07/10	ND	1500	ND	ND	160	ND
A15C	14.5-17.5	07/10	ND	15000	ND	ND	2300	ND
A15D	4-9	07/12	ND	ND	ND	ND	ND	ND
A15D	12-14	07/12	ND	ND	ND	ND	ND	ND
A15D	19-24	07/12	ND	ND	ND	ND	ND	ND
A15D	24-29	07/12	ND	ND	ND	ND	ND	ND
A16B	9-12		ND	ND	1600000	ND	BDL	ND
A16C	2-5		ND	ND	ND	BDL	ND	ND
A21C	4-8		ND	ND	ND	ND	ND	30000
A21D	4-9	07/10	ND	ND	ND	ND	BDL	ND
A21D	9-14	07/10	ND	ND	ND	ND	BDL	ND
A21D	14-19	07/10	ND	ND	ND	ND	ND	ND
A22A	9-14	07/11	ND	ND	ND	ND	ND	ND
A22A	19-22	07/11	ND	ND	ND	ND	ND	ND
A22A	24-28	07/11	ND	ND	ND	ND	ND	ND
A22B	0-7		ND	ND	ND	120000	ND	ND
A22D	4-9	07/11	ND	ND	ND	ND	ND	12000
A22D	9-14	07/11	ND	ND	ND	ND	ND	ND
A22D	24-27	07/11	ND	ND	ND	ND	ND	ND
A23A	19-20		ND	ND	ND	150000	ND	ND

** units : ug/kg **

CER 093715

EPA/CERRO COPPER/ELL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

CONFIDENTIAL 92-CV-204-WDS

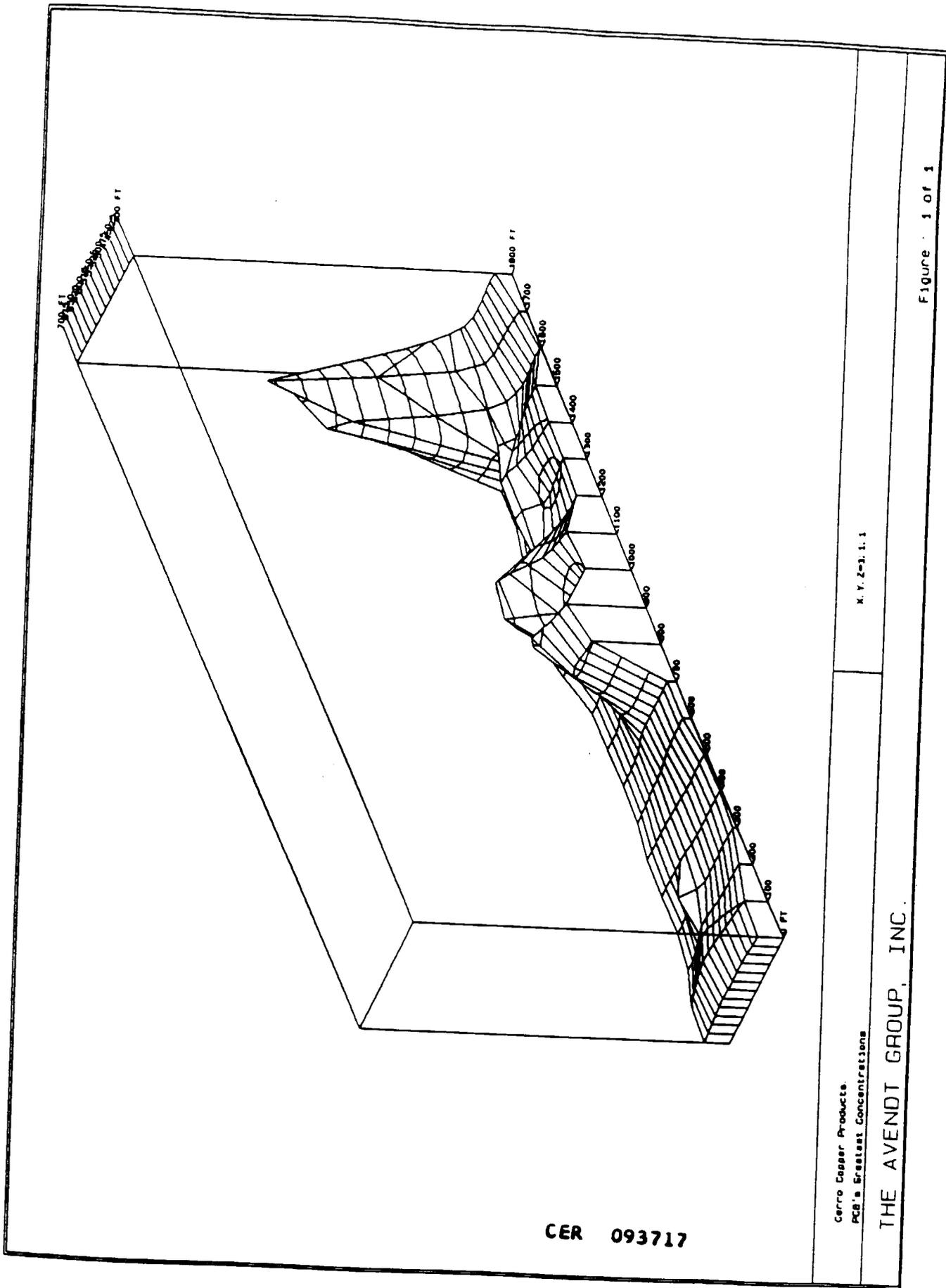


Cerro Copper Products
PCB's Greatest Concentrations

THE AVENDI GROUP, INC.

CER 093716

CONFIDENTIAL 92-CV-204-WDS

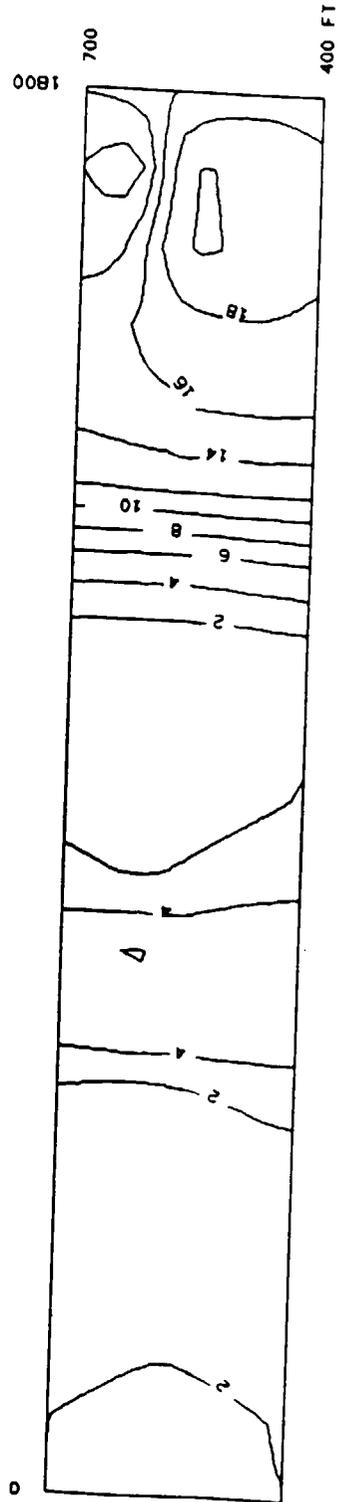
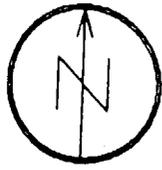


Cerro Copper Products.
 PCB's Greatest Concentrations
 X, Y, Z=1, 1, 1

THE AVENDT GROUP, INC.

CONFIDENTIAL 92-CV-204-WDS

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE



CER 093718

0 FT

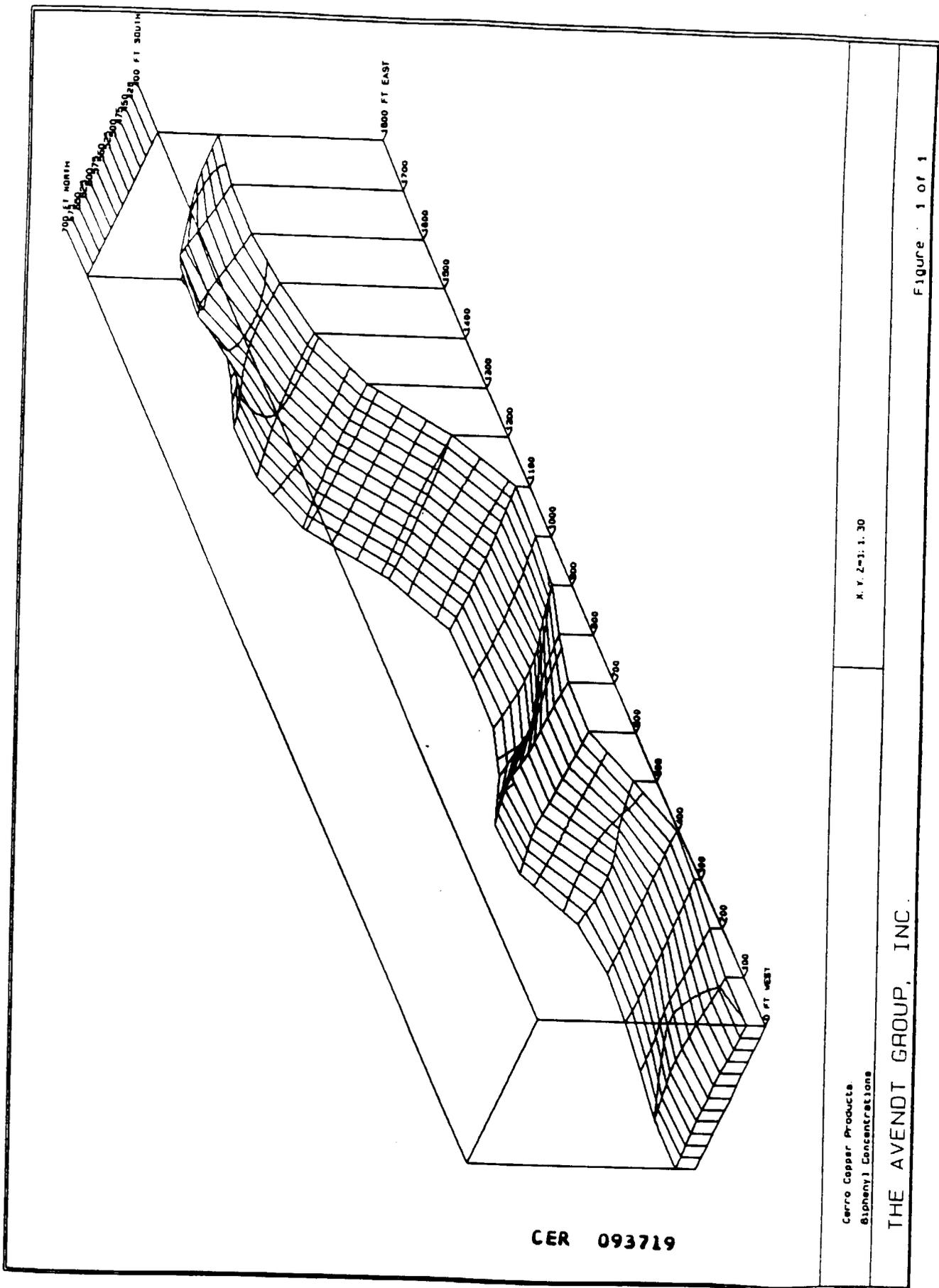
Cerro Copper Products
Biophenyl Concentrations

THE AVENDT GROUP, INC

Figure 1 of 1

CONFIDENTIAL 92-CV-204-WDS

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE



K. V. 2=1: 1. 30

Cerro Copper Products
 Biphenyl Concentrations

THE AVENT GROUP, INC.

CONFIDENTIAL 92-CV-204-WDS

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

**CREEK SEDIMENT: PCB CONCENTRATION/
FREQUENCY DISTRIBUTION GRAPH**

CER 093720

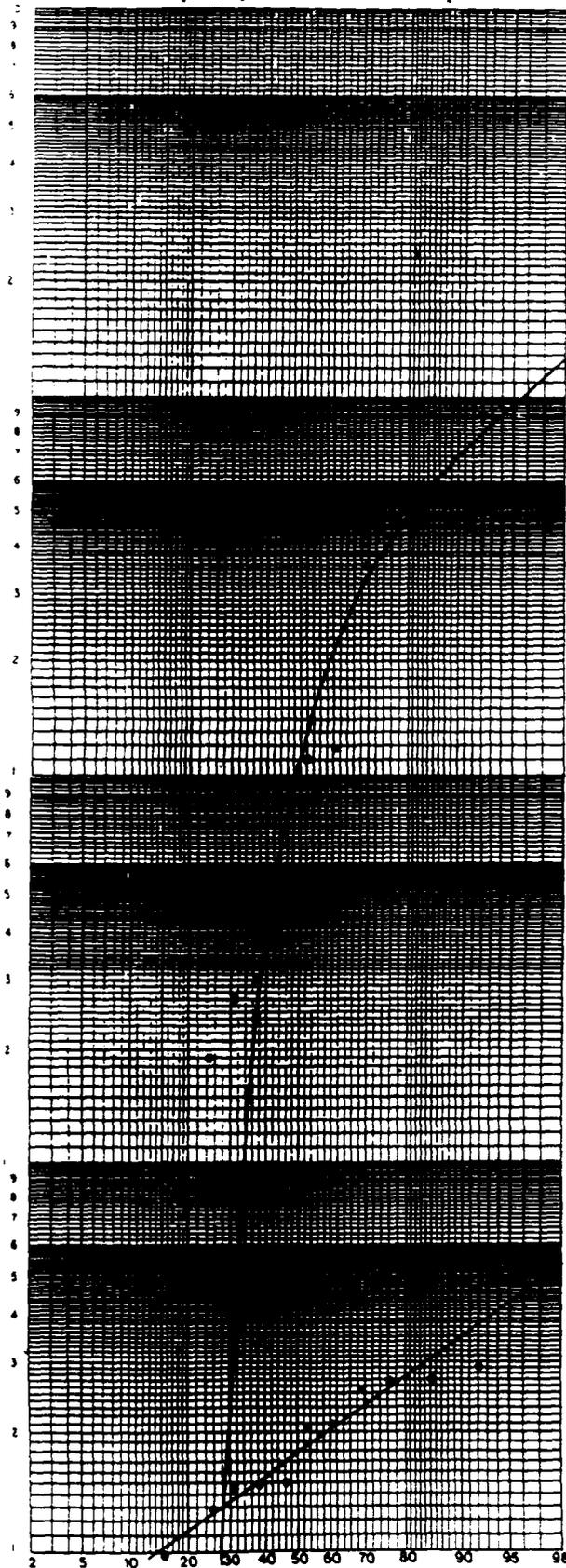
CONFIDENTIAL 93-CV-204-WDS

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

CERRO COPPER PRODUCTS COMPANY

Creek Sediment PCB Concentration

Frequency Distribution Graph



CER 093721

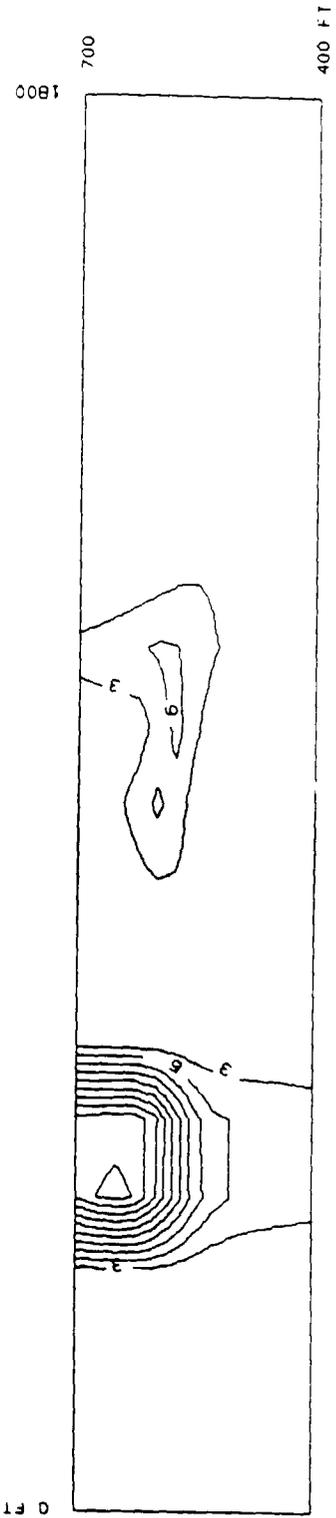
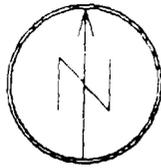
CONFIDENTIAL 92-CV-204-WDS

EPTOX DATA

CER 093722

CONFIDENTIAL 93-CV-204-WDS

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE



CER 093724

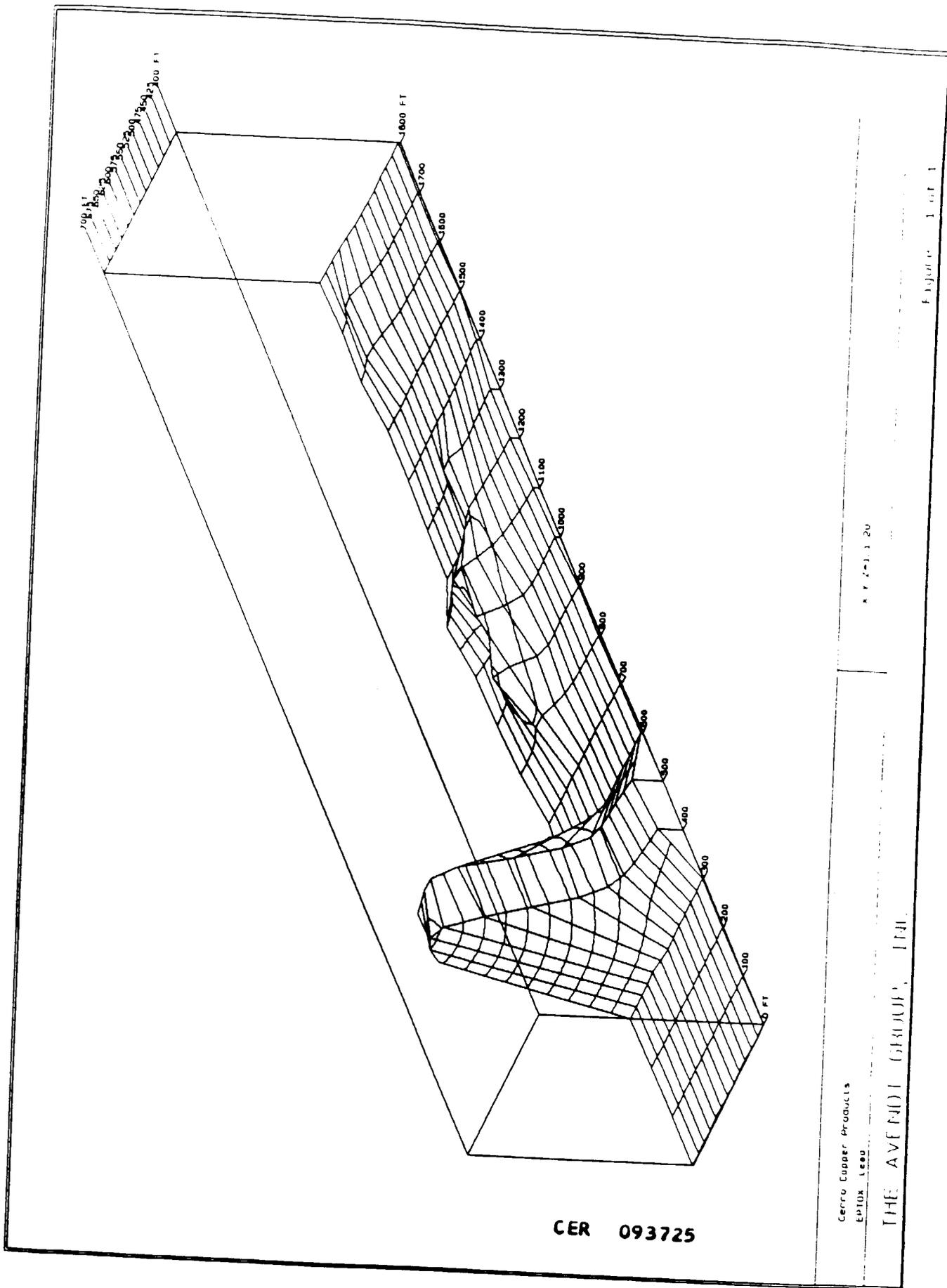
Cerro Copper Products
EPI/DA Lead

THE AVENDI GROUP, INC.

Figure 1 of 1

CONFIDENTIAL 92-CV-204-WDS

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

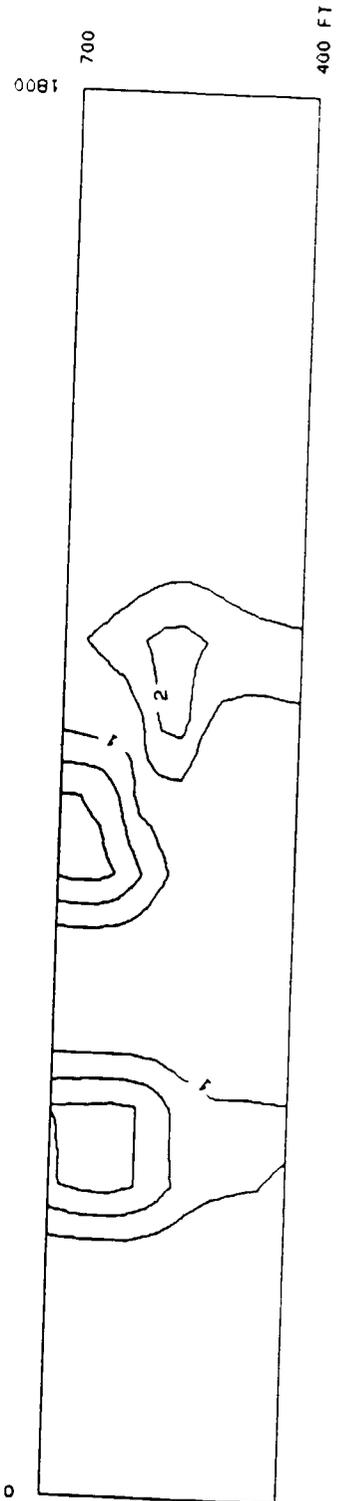
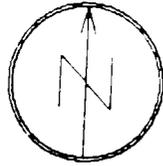


CER 093725

Cerro Copper Products
 EPTOX LEAD

THE AVENUE GROUP, LLC

8/7/11 120



CER 093726

0 FT

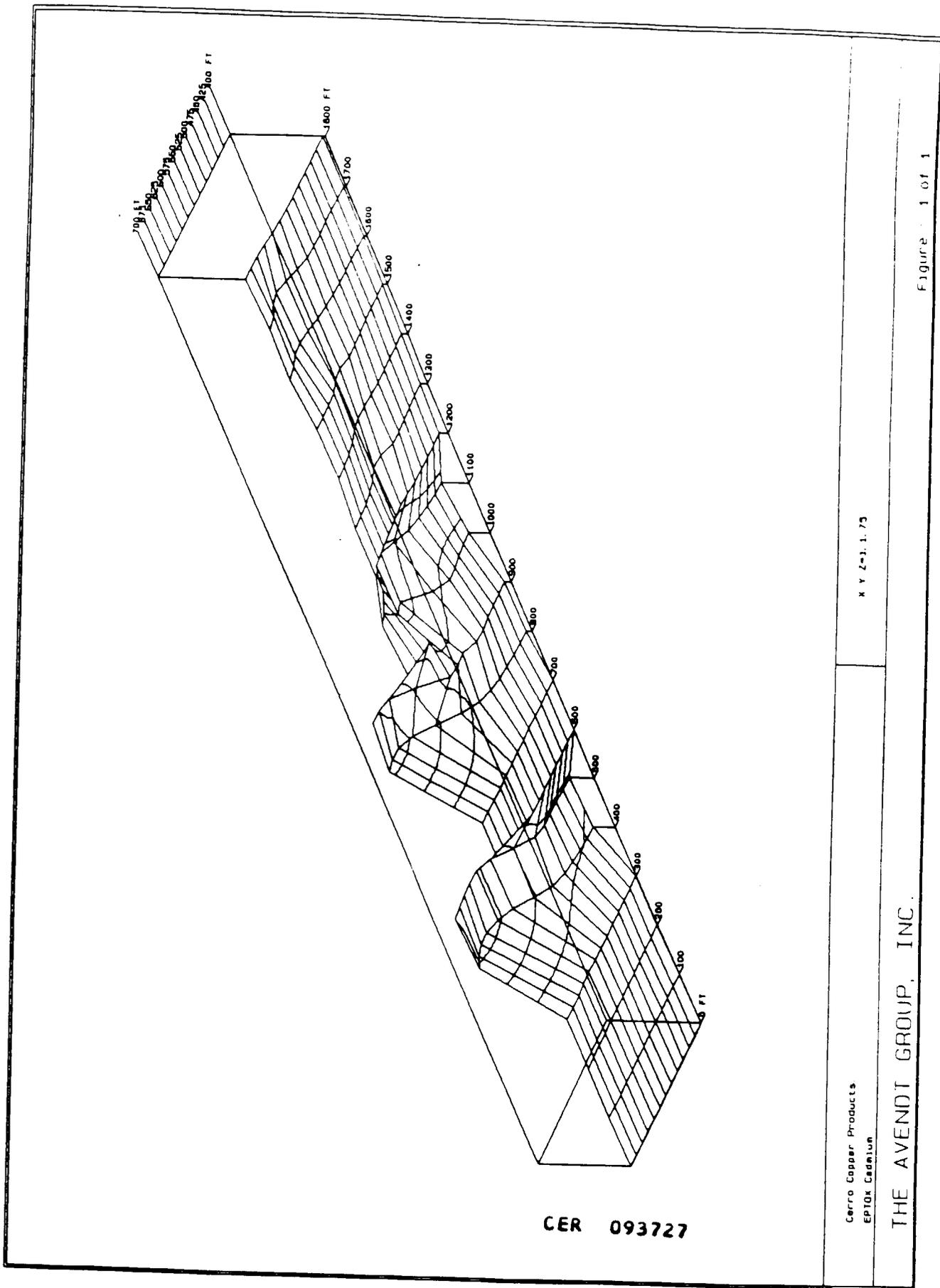
Cerro Copper Products
EPIOX Cadmium

THE AVENT GROUP, INC.

Figure 1 of 1

CONFIDENTIAL 92-CV-204-WDS

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE



X Y Z-1.1.73

Cerro Copper Products
EPTO: Cadmium

THE AVENDT GROUP, INC.

Figure 1 of 1

CONFIDENTIAL 92-CV-204-WDS

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

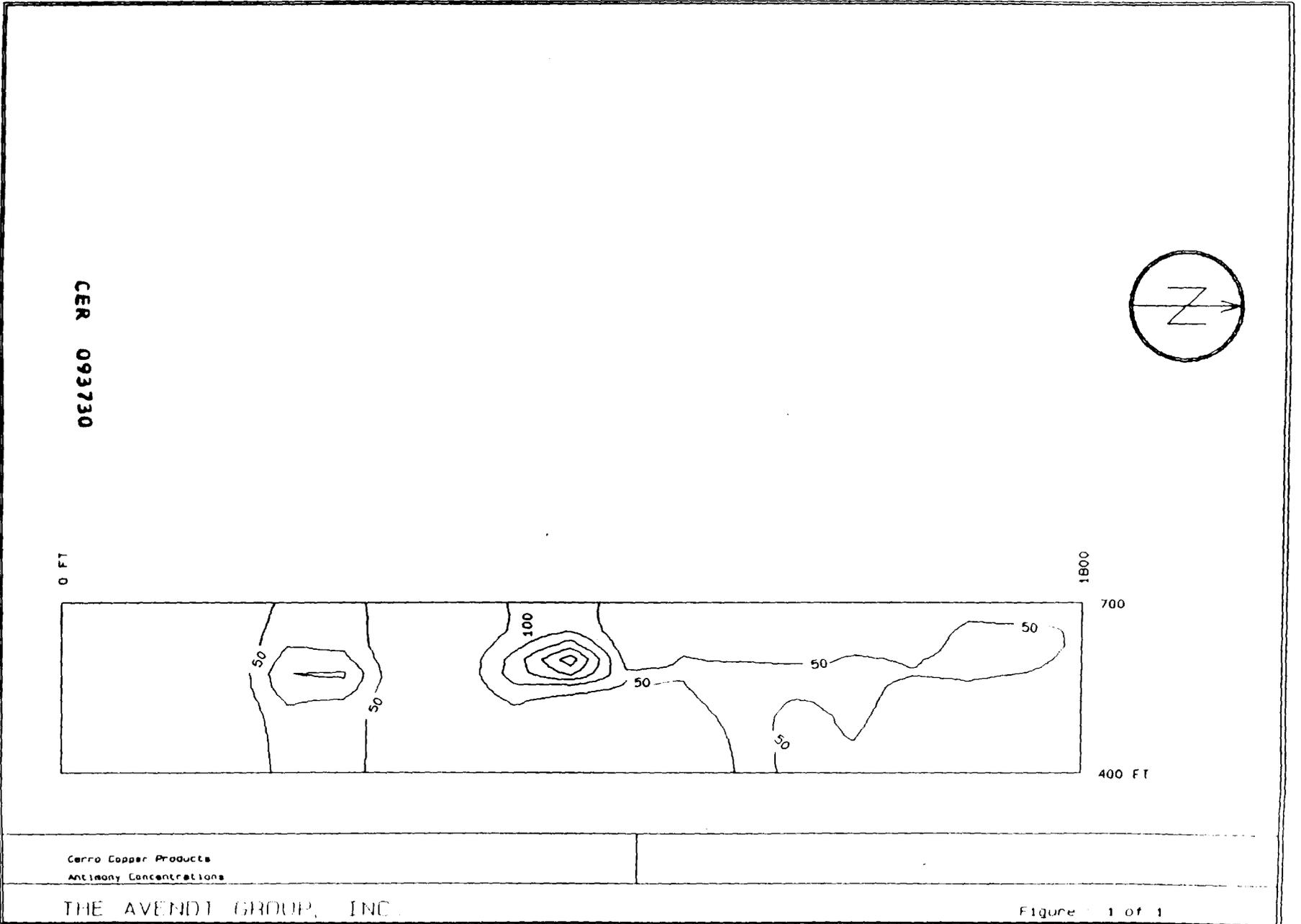
TOTAL METALS DATA

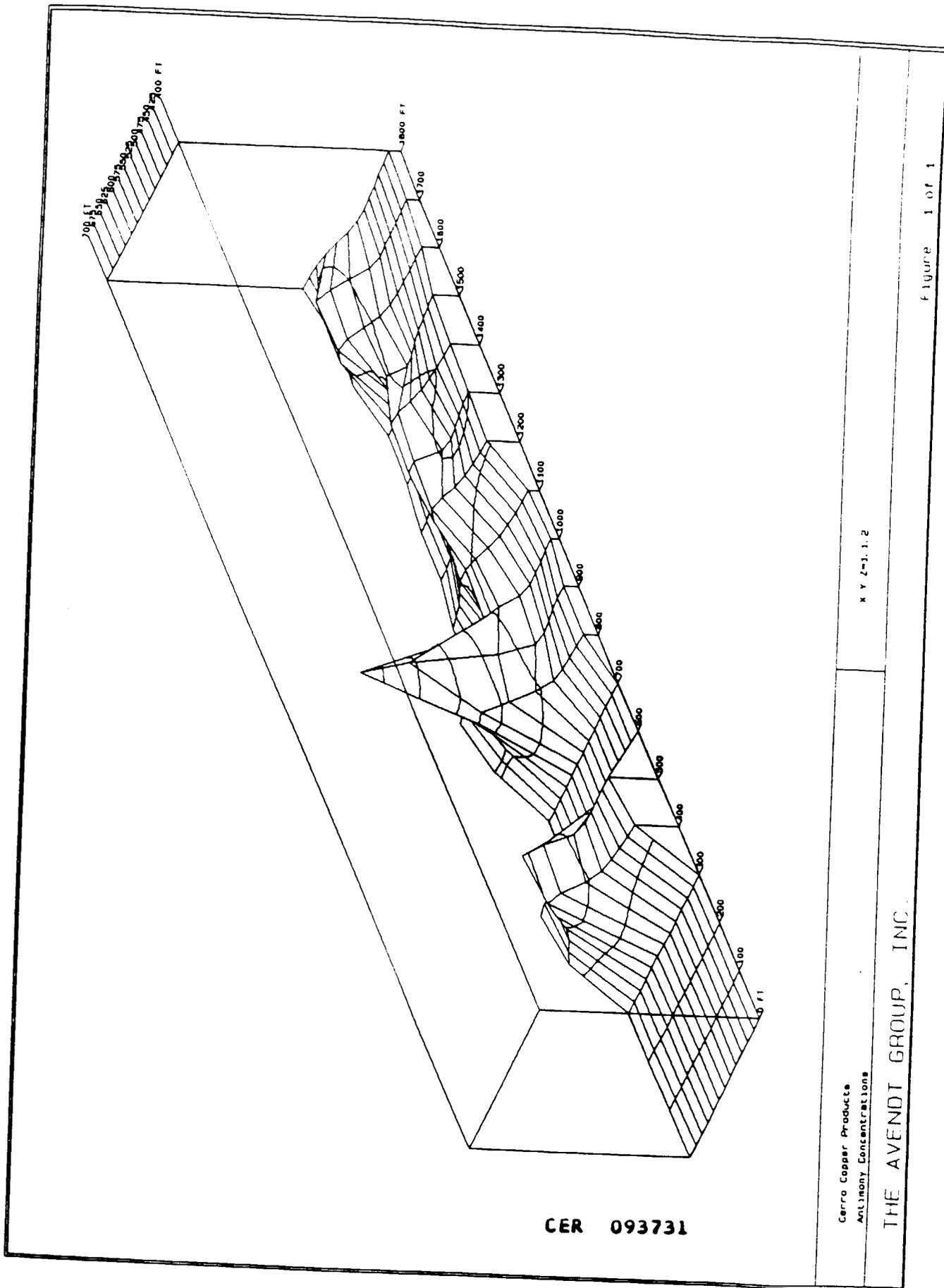
CER 093728

CONFIDENTIAL 92-CV-304-WDS

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

CONFIDENTIAL 92-CV-204-WDS





CER 093731

Cerro Copper Products
Antimony Concentrations

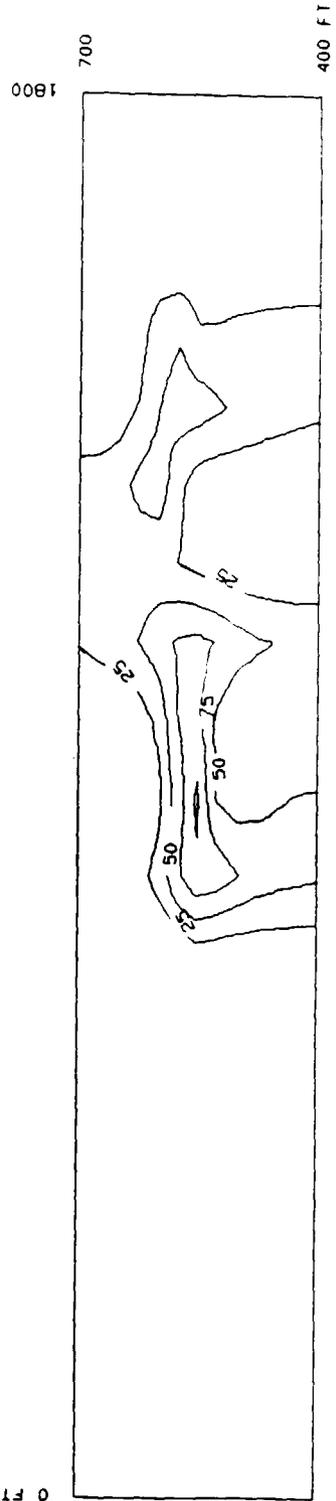
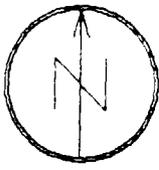
X Y Z=1.1.2

THE AVENTI GROUP, INC.

Figure 1 of 1

CONFIDENTIAL 92-CV-204-WDS

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE



CER 093732

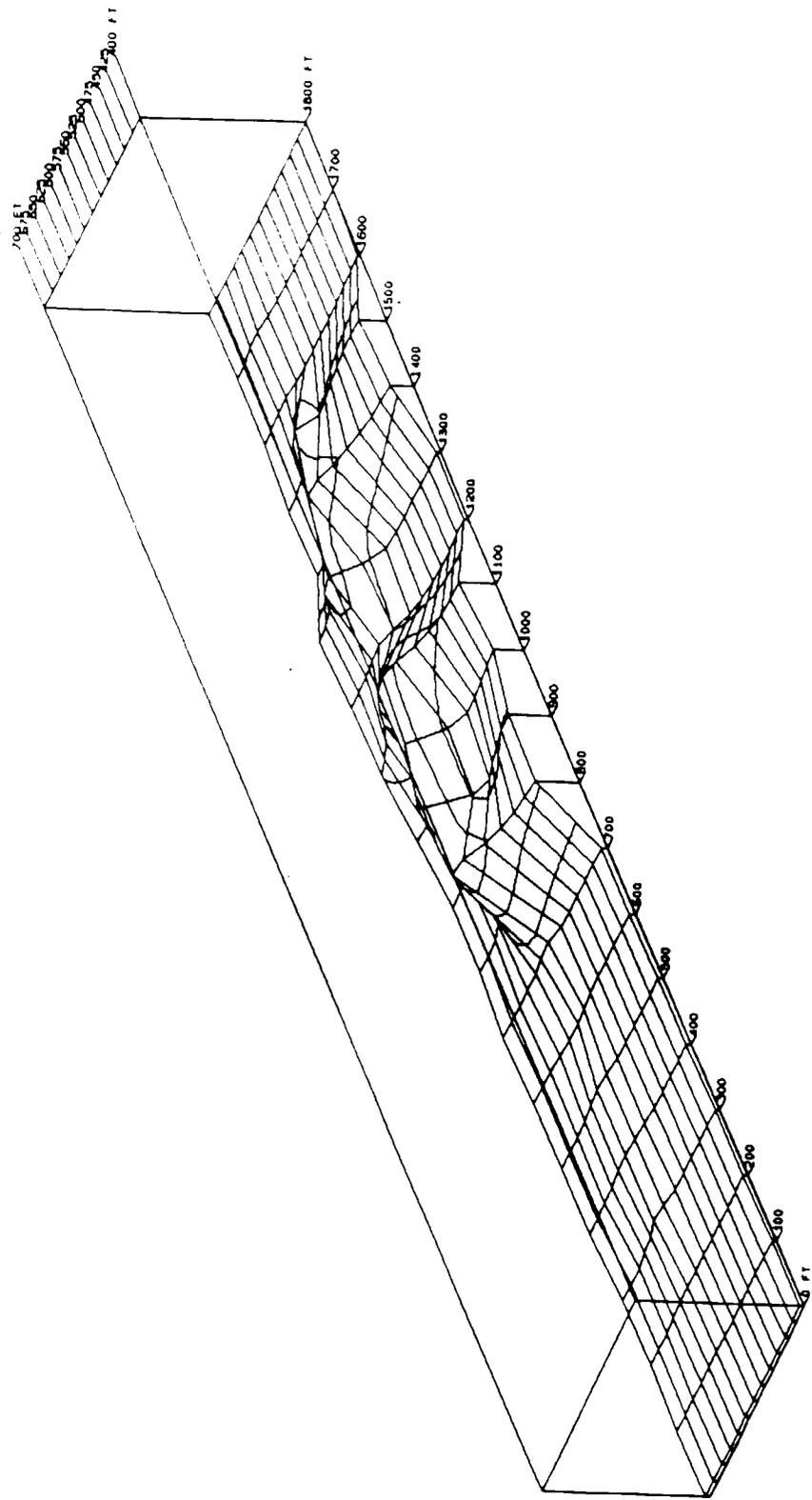
Cerro Copper Products
Arsenic Concentrations

THE AVENUE GROUP, INC.

Figure 1 of 1

CONFIDENTIAL 92-CV-204-WDS

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE



CER 093733

Cerro Copper Products
 Arsenic Concentrations

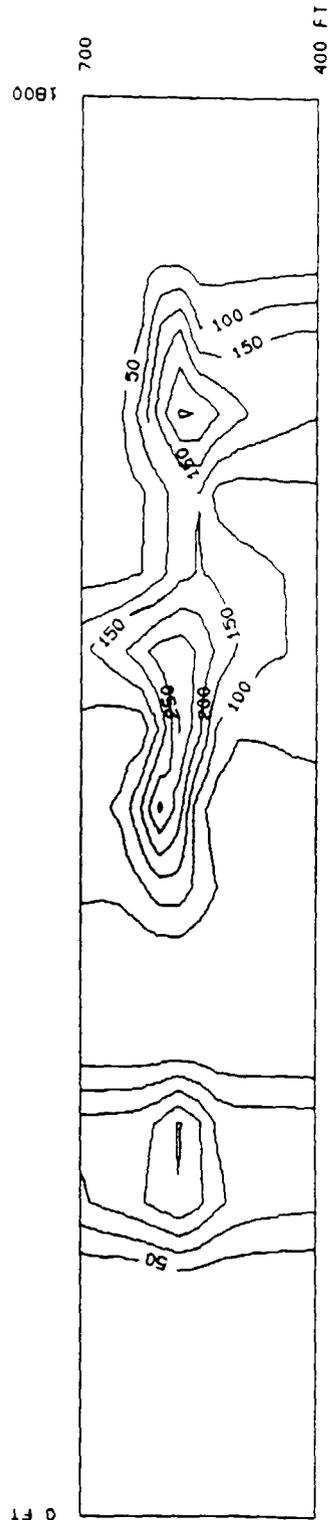
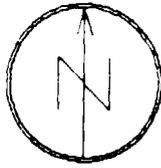
X Y Z=J, I, 2

THE AVENTI GROUP, INC.

Figure 1 of 1

CONFIDENTIAL 92-CV-204-WDS

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE



CER 093734

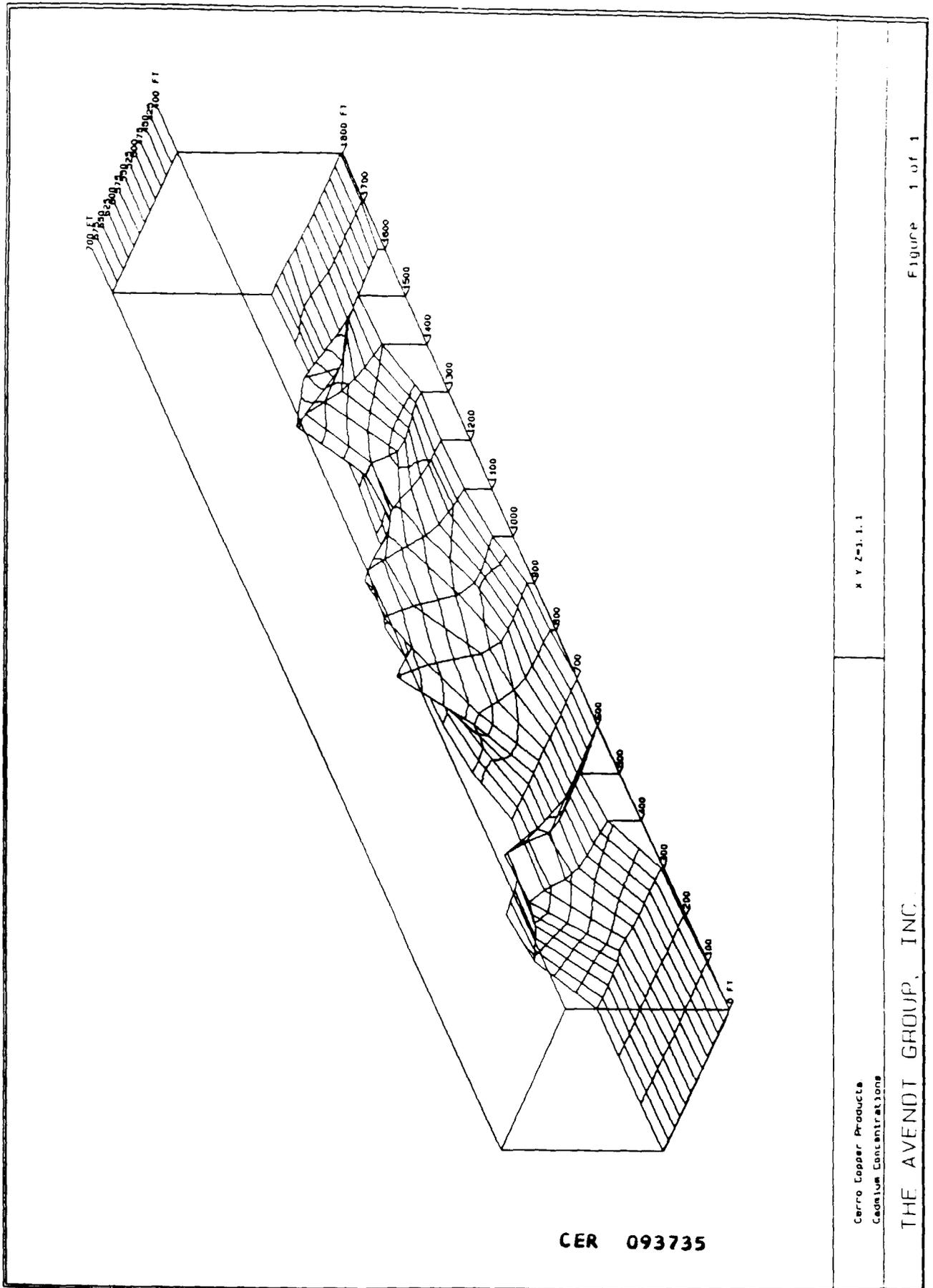
Cerro Copper Products
Leadium Concentrations

THE AVENET GROUP, INC.

Figure 1 of 1

CONFIDENTIAL 92-CV-204-WDS

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE



CER 093735

X Y Z=J. I. 1

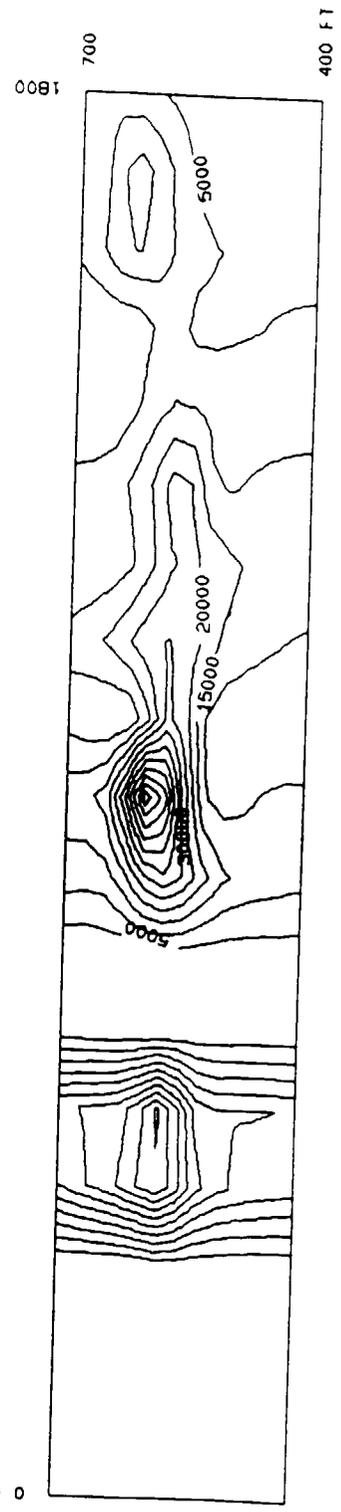
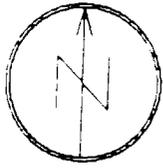
Cerro Copper Products
Cadmium Concentrations

THE AVENTI GROUP, INC.

Figure 1 of 1

CONFIDENTIAL 92-CV-204-WDS

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE



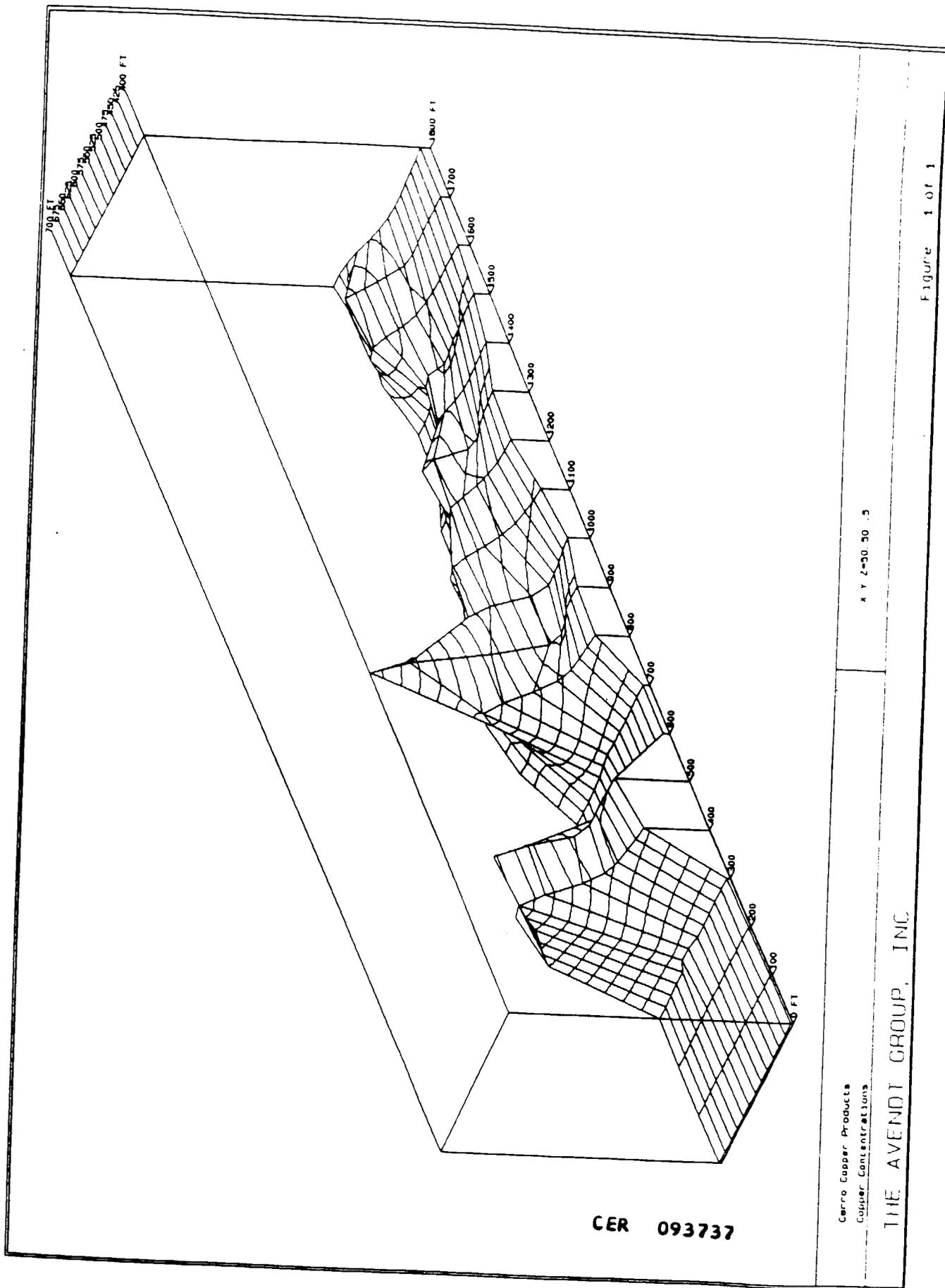
CER 093736

Cerro Copper Products
Copper Concentrations

THE AVENDI GROUP, INC.

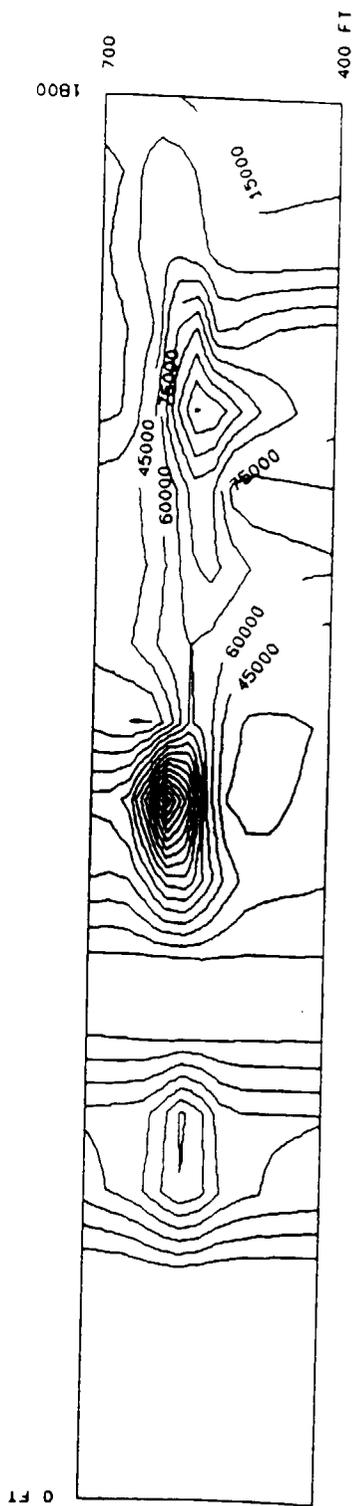
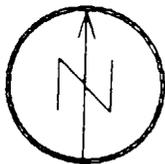
CONFIDENTIAL 92-CV-204-WDS

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE



CONFIDENTIAL 92-CV-204-WDS

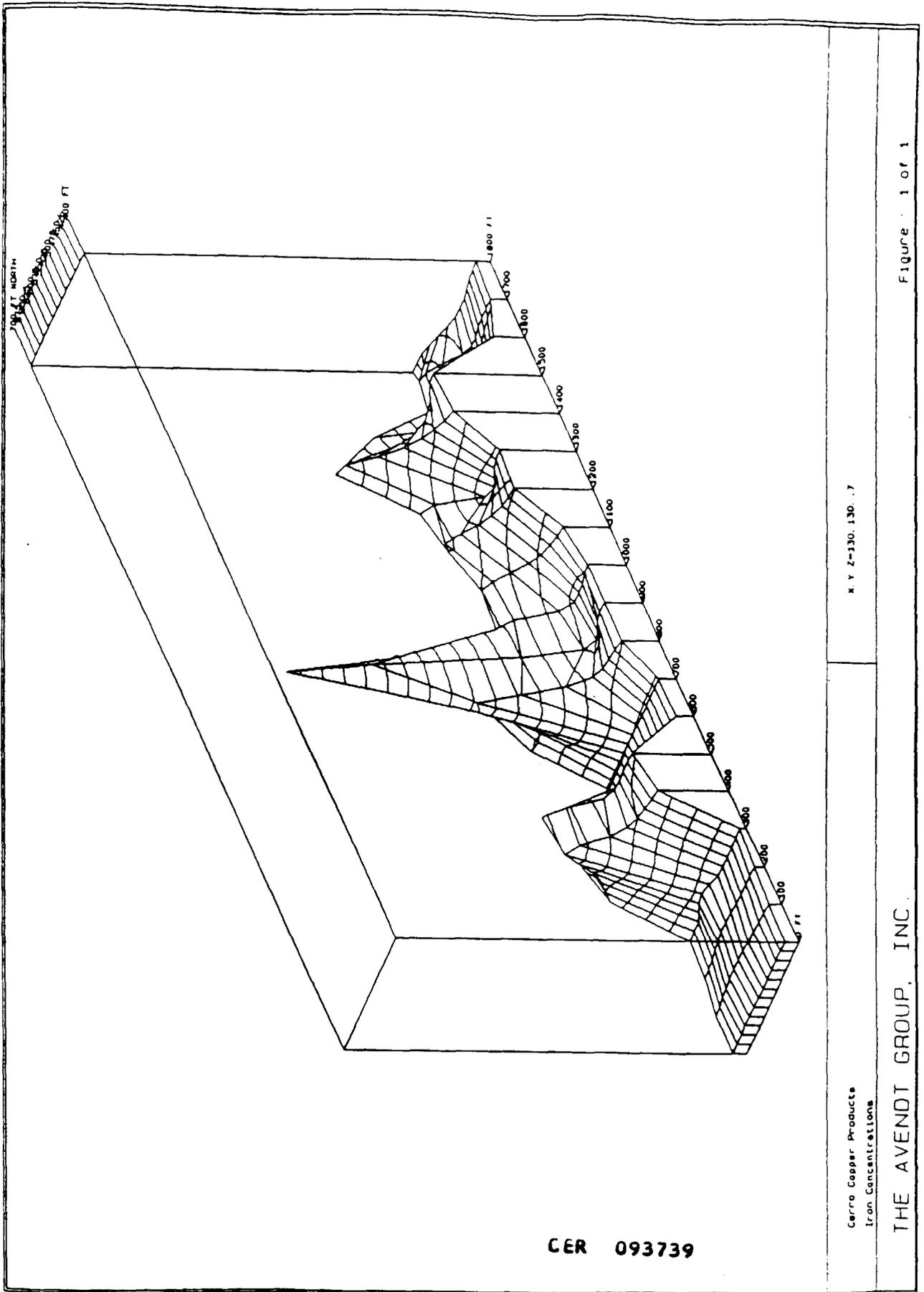
EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE



CER 093738

Cerro Copper Products
Iron Concentrations

THE AVENDI GROUP, INC



CER 093739

Cerro Copper Products
Iron Concentrations

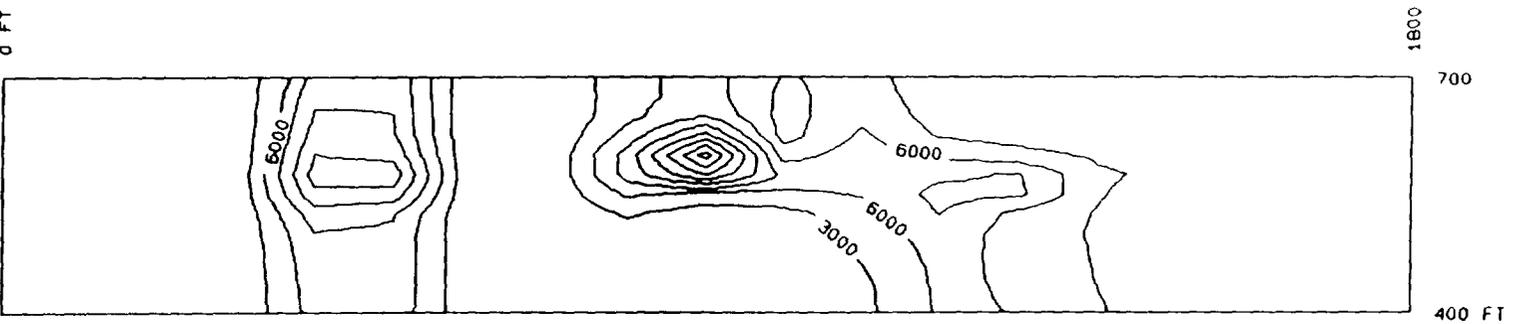
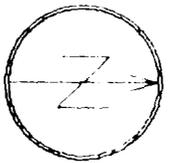
N. Y. Z-130, 130, .7

THE AVENDT GROUP, INC.

Figure 1 of 1

CONFIDENTIAL 92-CV-204-WDS

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE



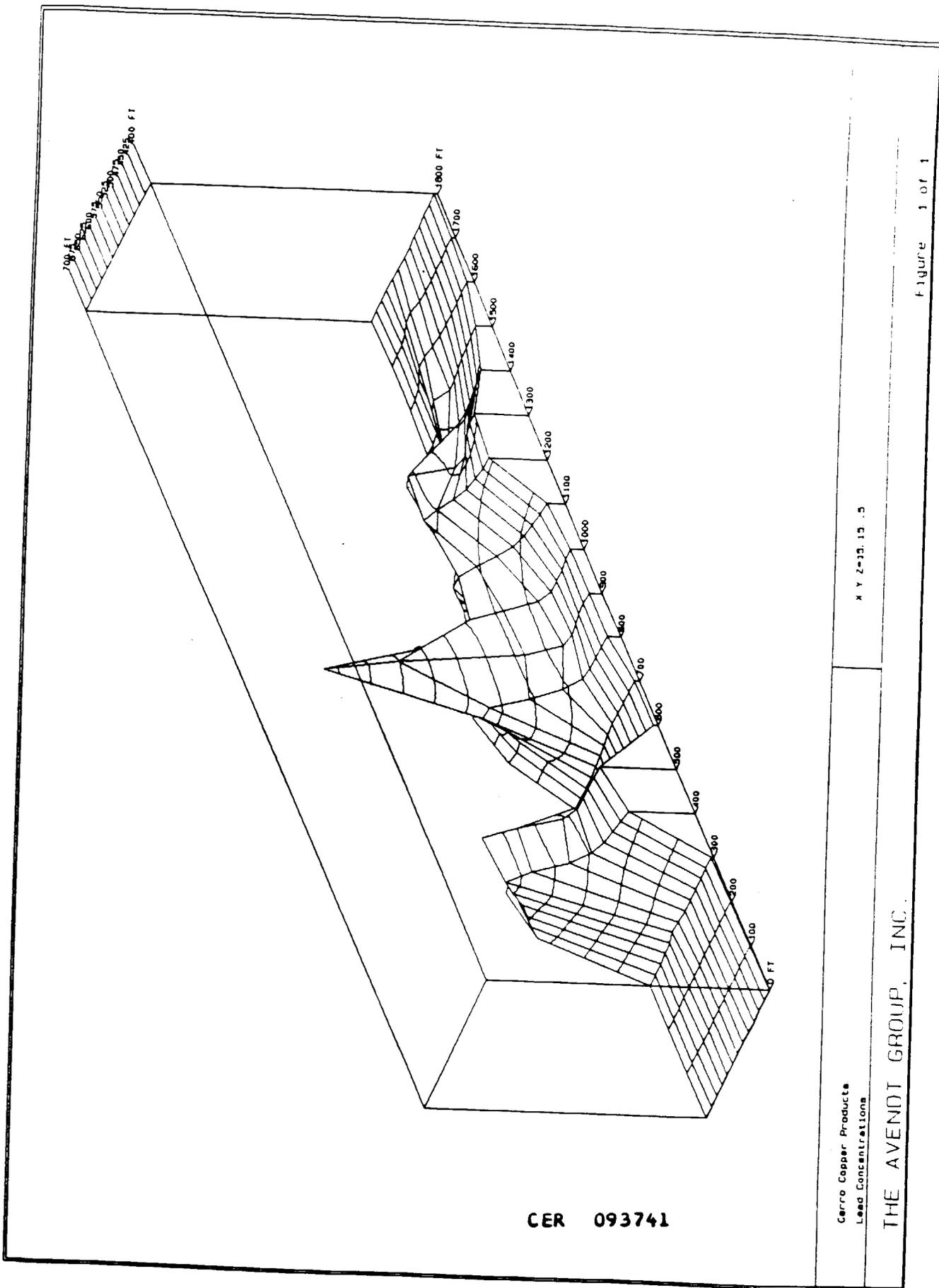
CER 093740

FT

Cerro Copper Products
Lead Concentrations

THE AVENDT GROUP, INC.

Figure 1 of 1



X Y Z-33.13 .5

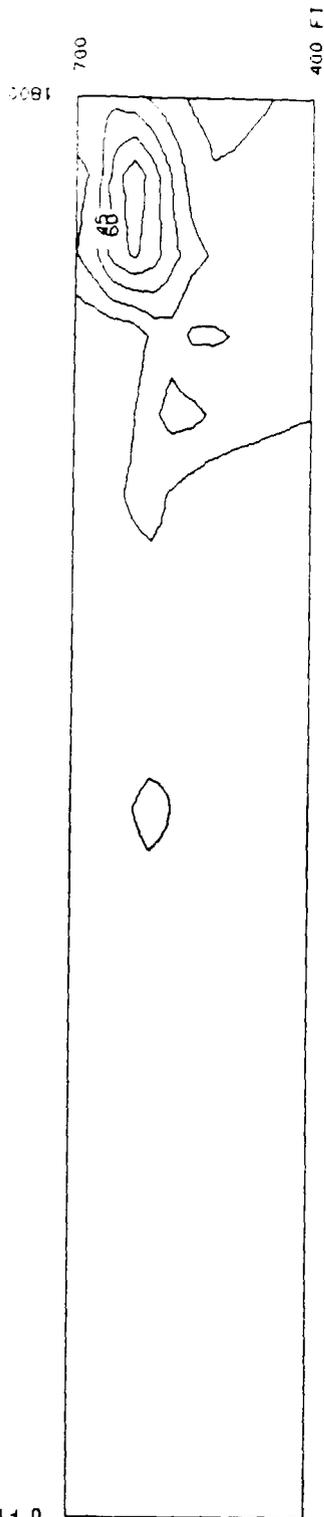
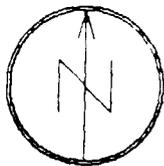
Cerro Copper Products
Lead Concentrations

THE AVENT GROUP, INC.

Figure 1 of 1

CONFIDENTIAL 92-CV-204-WDS

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE



CER 093742

100

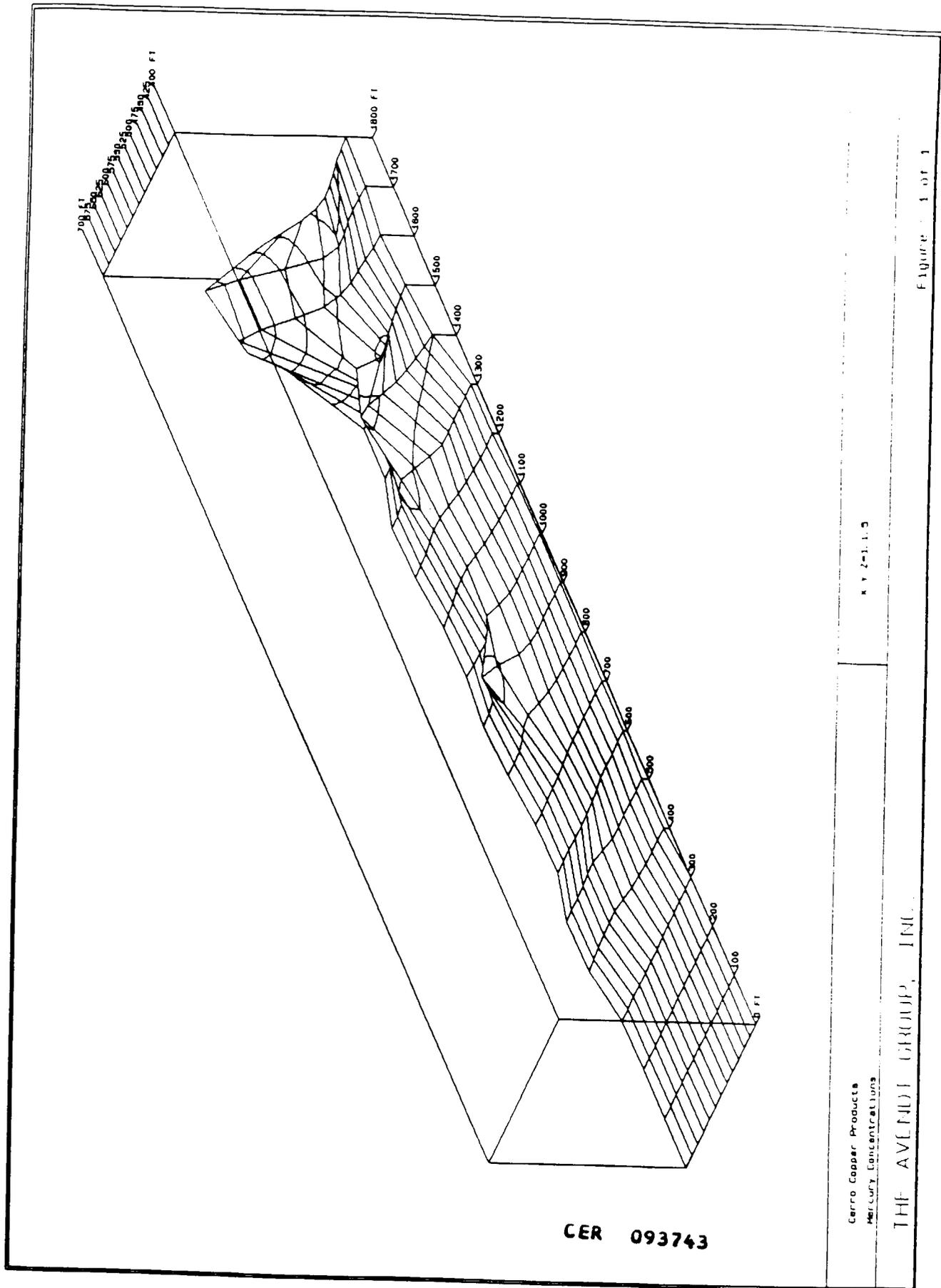
Cerro Copper Products
Mercury Concentrations

THE AVENDT GROUP, INC.

Figure 1 of 1

CONFIDENTIAL 92-CV-204-WDS

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE



K Y 2-1.1.3

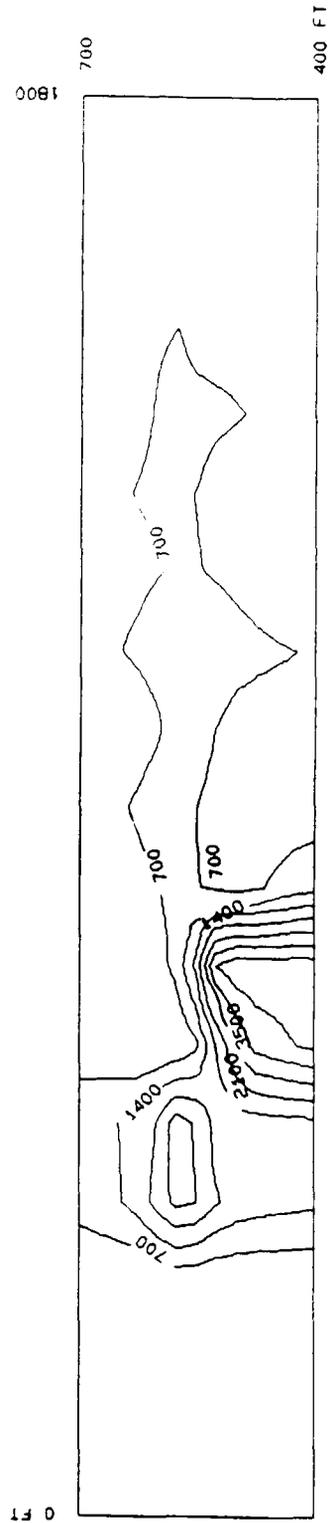
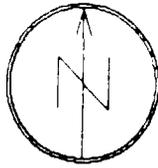
Cerro Copper Products
Mercury Concentrations

THE AVENUE GROUP, INC.

Figure 1 of 1

CONFIDENTIAL 92-CV-204-WDS

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE



CER 093744

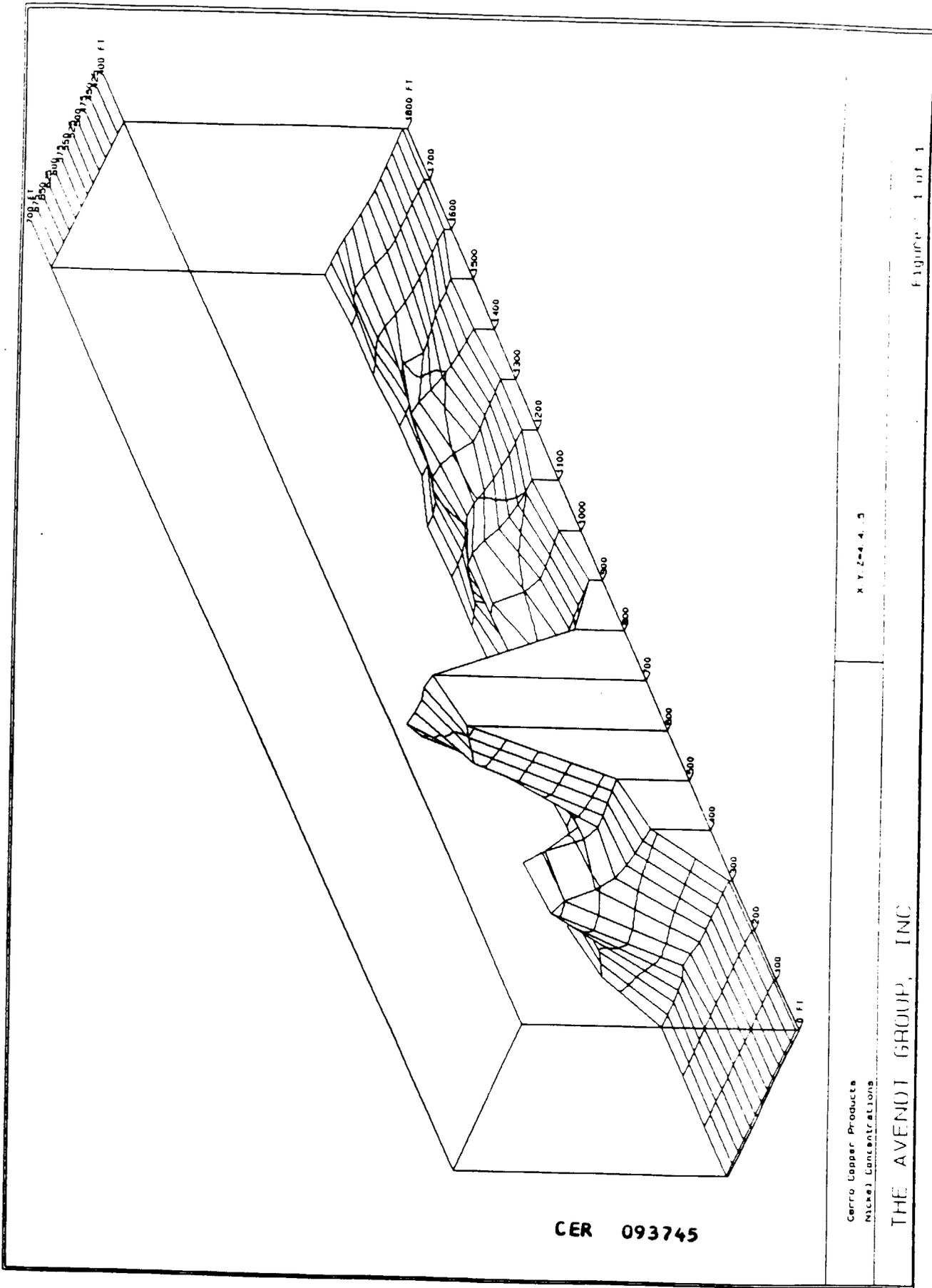
Cerro Copper Products
Nickel Concentrations

THE AVENDT GROUP, INC.

Figure 1 of 1

CONFIDENTIAL 92-CV-204-WDS

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE



CER 093745

X Y Z=4 4 3

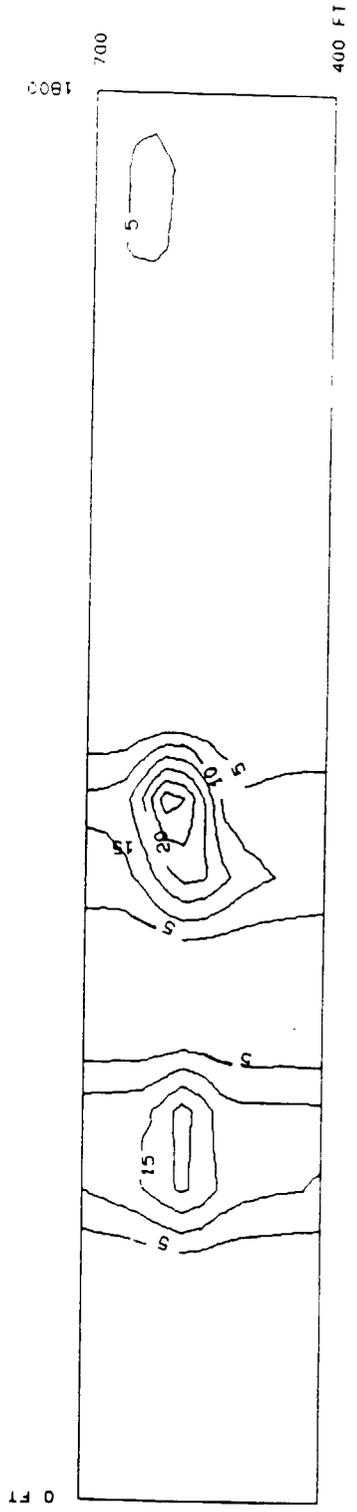
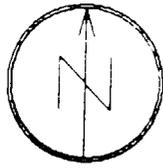
Cerro Copper Products
 Nickel Concentrations

THE AVENOT GROUP, INC

Figure 1 of 1

CONFIDENTIAL 92-CV-204-WDS

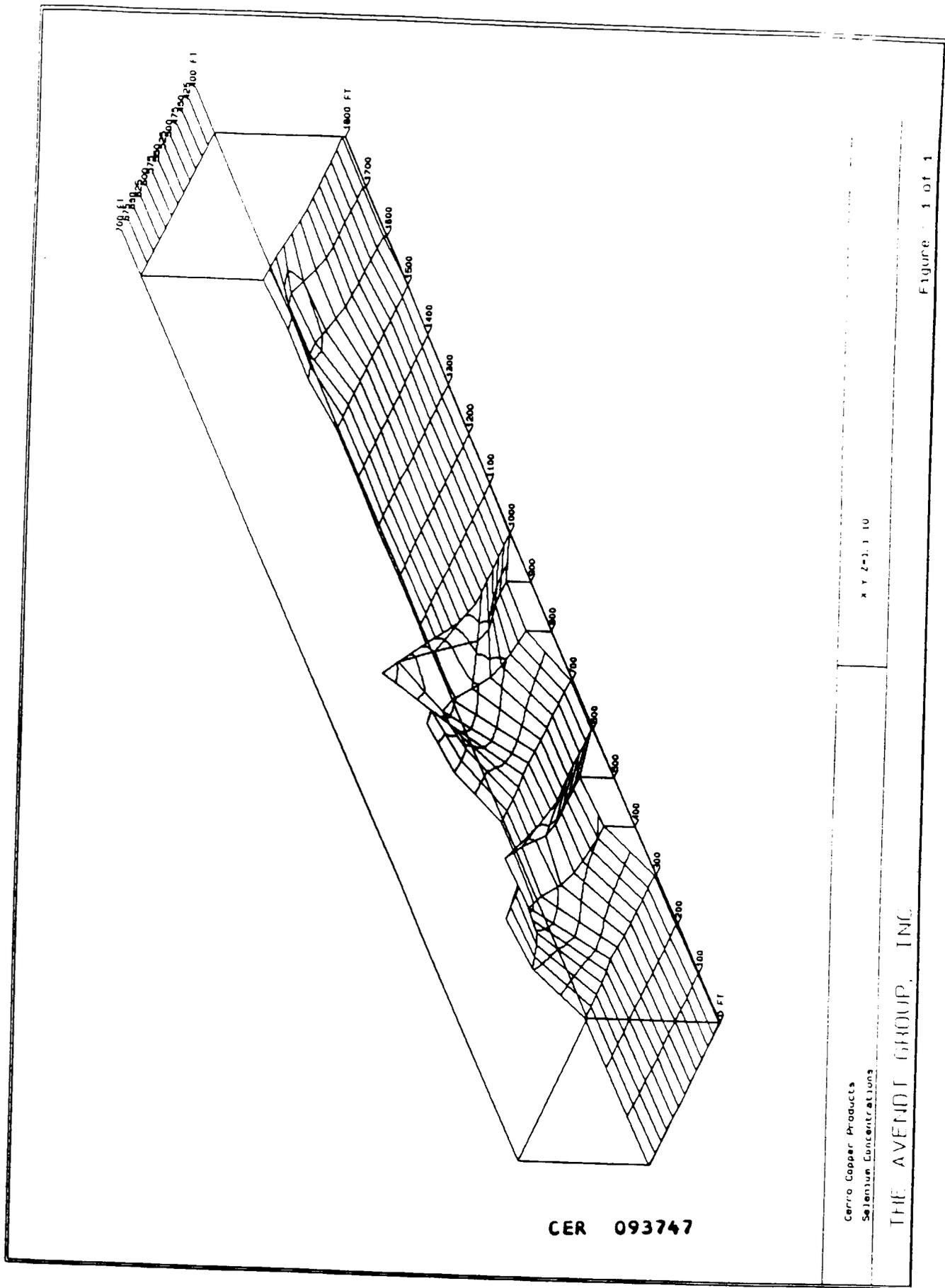
EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE



CER 093746

Cerro Copper Products
Selenium Concentrations

THE AVENDI GROUP, INC.



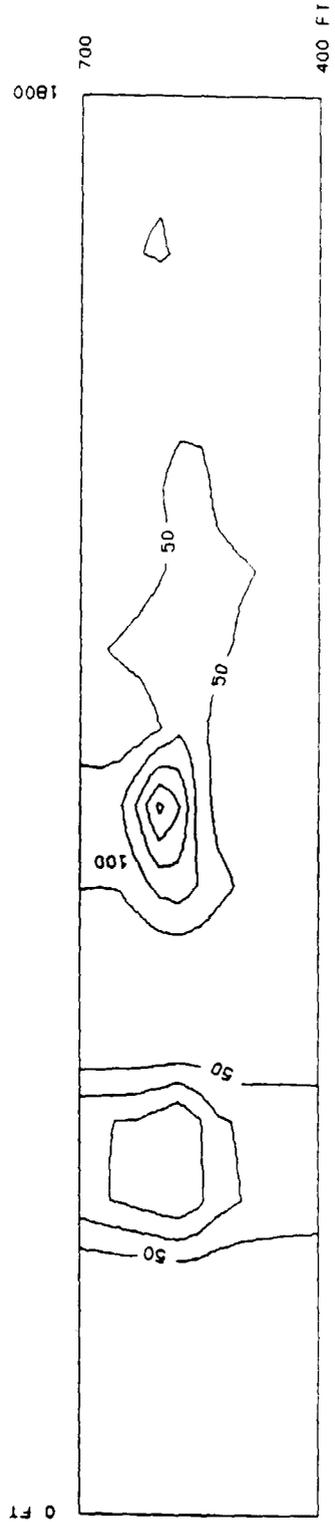
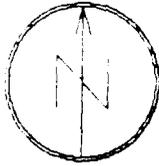
X Y Z=1.1 10

Cerro Copper Products
Seelenium Concentrations

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CONFIDENTIAL 92-CV-204-WDS

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE



CER 093748

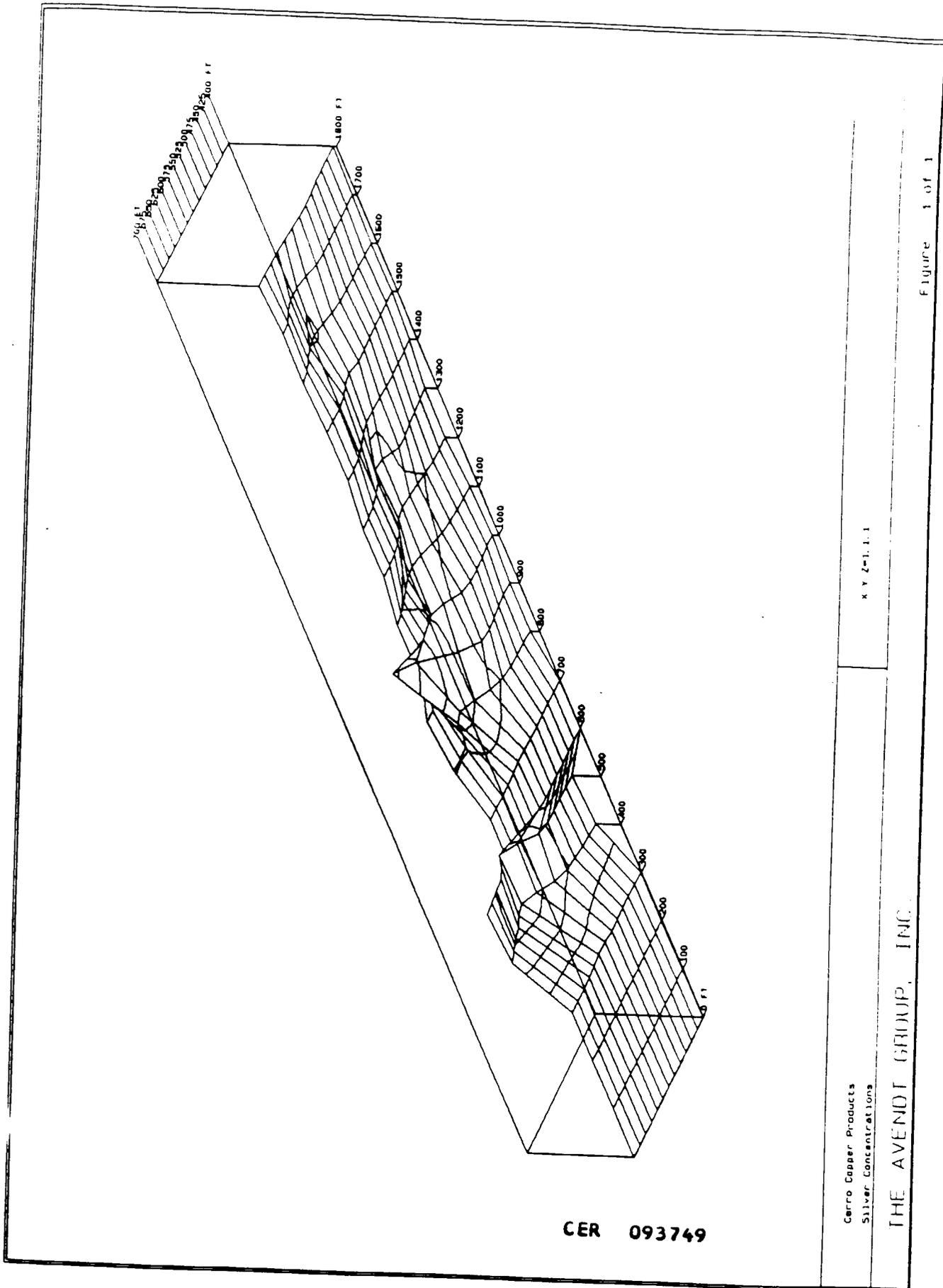
Cerro Copper Products
Silver Concentrations

THE AVENDI GROUP, INC

Figure 1 of 1

CONFIDENTIAL 92-CV-204-WDS

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE



Cerro Copper Products
Silver Concentrations

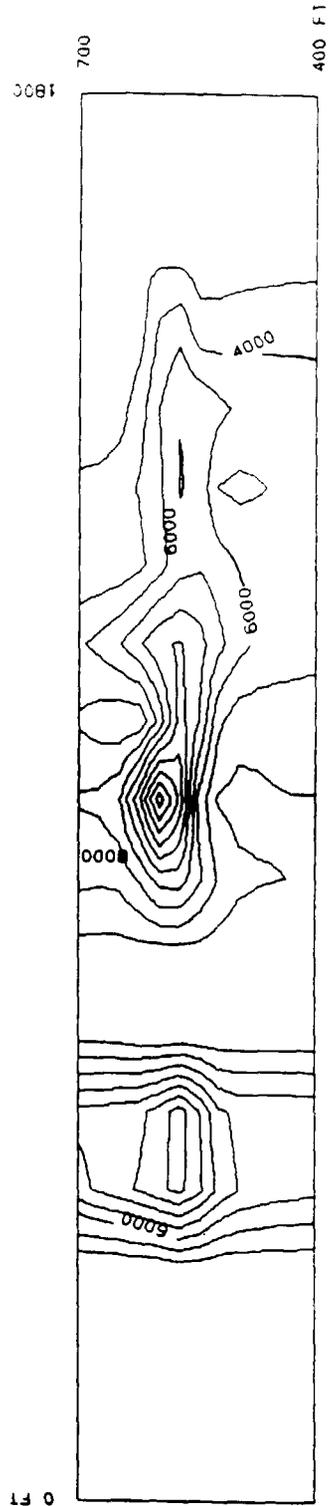
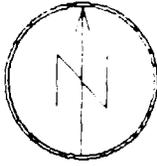
X Y Z=1,1,1

THE AVENDI GROUP, INC

Figure 1 of 1

CONFIDENTIAL 92-CV-204-WDS

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE



CER 093750

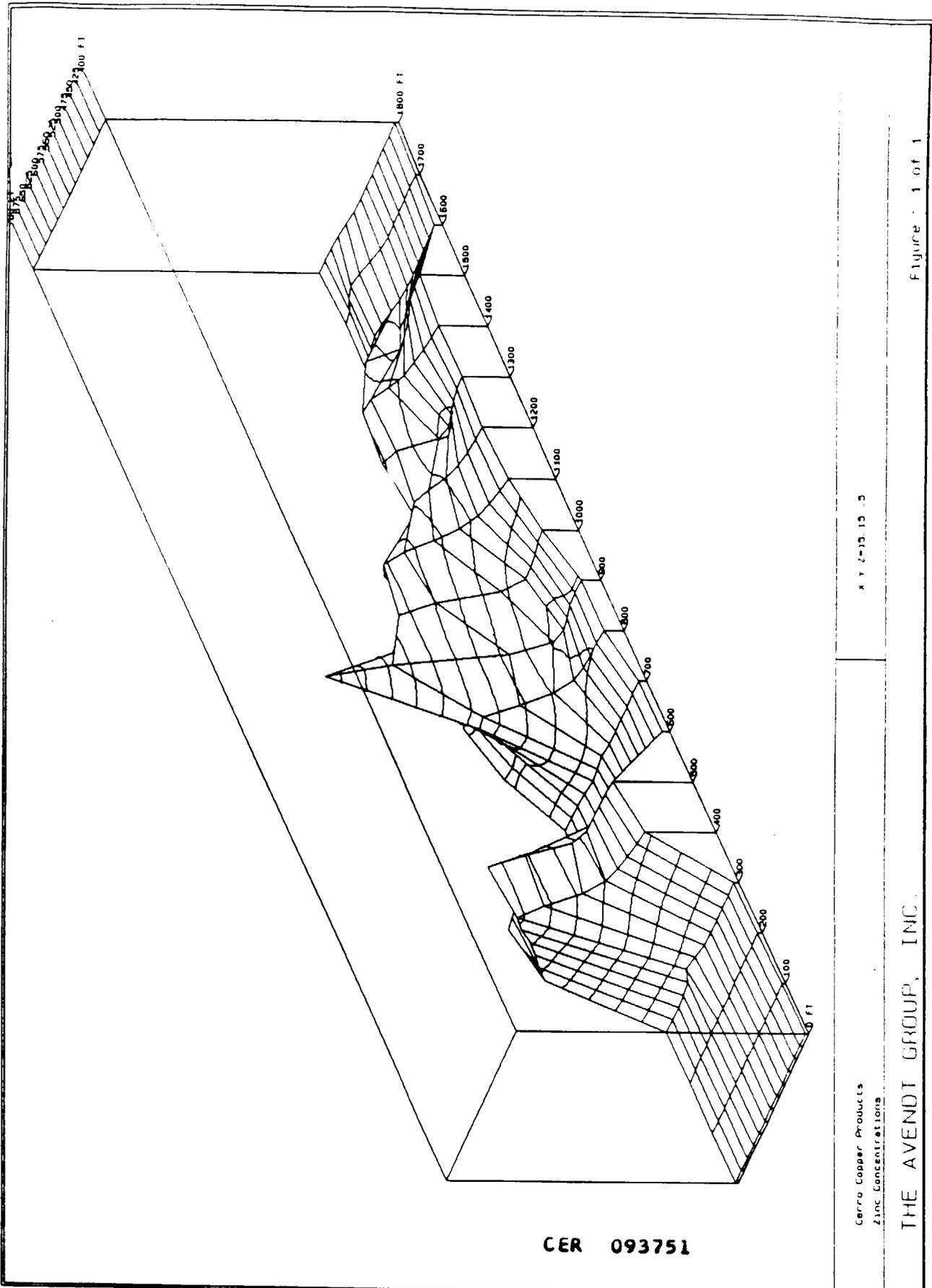
Cerro Copper Products
Zinc Concentrations

THE AVENDT GROUP, INC.

Figure 1 of 1

CONFIDENTIAL 92-CV-204-WDS

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE



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X Y Z=13 15 .5

Cerro Copper Products
Zinc Concentrations

THE AVENDT GROUP, INC.

Figure 1 of 1

CONFIDENTIAL 92-CV-204-WDS

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

CHARACTERISTICS OF HAZARDOUS WASTE TABLE

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EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

Characteristics of Hazardous Waste

Sample ID	Date	Asst	Solids (X)	Alkalinity (X)	Cyanide (mg/kg)	Dioxane (mg/kg)	Fluoride Total (mg/kg)	Formal (mg/kg)	pH	Sulfide (mg/kg)	Total Sulfide (mg/kg)	Observed Creek Sediment
A101	8-7		85.9									
A102	9-10	08/22	64.4									
A103	15-17	08/22	96.3	0.97	ND	ND	>200	7.3	ND	ND	0	
A104	20-22	08/22	70.6								1.42	
A105	24-29	08/22	79.2								14.3	
A106	30-38	08/22	81.0								1.89	
A107	8-13	07/19	71.9								0	
A108	13-18	07/19	65.8								0	
A108	4-8	07/18	96.3	0.12	ND	ND	>200	7.7	86.3	ND	1.57	
A109	9.1-13.6	07/18	57.3								1.21	
A109	12-17	07/18	76.9								1.92	
A110	2-6.5	07/18	99.7	72.6	ND	ND	>200	7.6	ND	ND	56	
A110	6.5-10.5	07/18	78.0								1.2	
A110	12.5-16.5	07/18	83.7								1.17	
A110	8-10	07/18	80.8	0.13	ND	2.5	>200	8.3	ND	ND	0	
A110	18.5-23.5	07/18	98.5	82.2	0.13	ND	>200	9.0	ND	ND	78	
A111	8-11	07/19	74.2								0	
A111	11-20.5	07/19	79.4								1.67	
A112	3-7	08/22	99.0	12.2	6.3	ND	>200	8.9	ND	ND	22	
A112	9-12	08/22	75.3								1.13	
A112	14-17	08/22	80.6								0	
A112	17-19	08/22	78.6								1.27	
A112	4-9	07/12	91.7	55.8	1.0	ND	>200	6.2	ND	ND	0	
A112	10-13	07/12	78.5								0	
A112	14-16	07/12	82.8								0	
A112	5-13	07/18	76.2								536	
A112	17-20	07/18	98.6	74.1	0.17	ND	>200	7.9	ND	ND	101	
A112	20-25	07/18	81.3								15.9	
A113	9-14	07/20									0	
A113	14-19	07/20									0	
A113	19-20.5	07/20									0	
A113	4.5-6	07/11	86.1	32.9	2.2	ND	>180	5.6	ND	ND	440	
A113	6-9.5	07/11	74.9								50	
A113	9.5-12	07/11	81.6								2.25	
A113	4-9.5	07/12	91.3	41.0	1.5	ND	95	6.2	ND	ND	910	
A113	6-13	07/12	77.5								25.6	
A113	13-16	07/12	83.1								0	
A113	18-23	07/19	99.2	76.0	0.14	ND	>200	7.7	ND	ND	1.7	
A114	4-9	07/20									1.099	
A114	13.5-23.5	07/20									1.062	
A114	23.5-28.5	07/20									0	
A114	4-9.5	07/11	94.3	59.9	1.1	ND	>200	6.6	ND	ND	114	
A114	8.5-11	07/11	84.1								6.3	
A114	4-8.5	07/11	87.2	23.1	2.7	ND	>180	6.0	ND	ND	540	
A114	8.5-10.5	07/11	59.1								2.22	
A114	13.5-16.5	07/11	84.0								6.2	
A114	10-14	07/12	95.8	79.9	0.68	ND	>200	8.0	ND	ND	0	
A114	15-19	07/12	77.1								0	
A114	24-29	07/12	84.5								0	

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EPA/CERRO COPPER/ELL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

Characteristics of Hazardous Waste

Sample I.D.	Date	Ash (%)	Solids (%)	Alkalinity (%)	Cyanide Reactive (mg/kg)	Cyanide Total (mg/kg)	Flash Point (deg F)	pH	Sulfide (mg/kg)	Sulfide Reactive (mg/kg)	Total PCBs
A15A 9-14	07/20										0
A15A 14-19	07/20										0
A15A 19-24	07/20										0
A15B 6-9	07/07	95.1	59.0	1.1	ND	ND	>200	7.9	ND	ND	0
A15B 13-16	07/07		83.8								1.7
A15B 16-19	07/07		79.6								9
A15C 4.5-9	07/10	85.4	26.0	0.97	ND	1.8	>200	7.4	ND	ND	0
A15C 9.5-14.5	07/10		79.9								980
A15C 14.5-17.5	07/10		82.3								1.66
A15D 4-9	07/12	96.6	83.0	0.64	ND	ND	>200	8.5	ND	ND	17.3
A15D 12-14	07/12		85.9								0
A15D 19-24	07/12		81.2								0
A15D 24-29	07/12		75.0								0
A16A 9-14	07/20										0
A16A 14-19	07/20										0
A16A 24-29	07/20										2.96
A16B 9-12	07/18	75.3	23.5	0.56	ND	19.2	>200	6.8	ND	ND	0
A16B 14-19	07/18		74.7								1600
A16C 2-5	07/18	84.6	20.2	0.14	ND	5.8	>200	6.8	ND	ND	5.4
A16C 7-12	07/18		69.2								0
A16C 12-17	07/18		79.7								13
A16D 13-18	07/20										1.55
A16D 18-23	07/20										0
A16D 23-31	07/20										.09
A16E 13-18	07/20										0
A16E 18-23	07/20										.81
A16E 25.5-28	07/20										1.99
A21B 1-6	08/22	80.6	40.3	2.1	ND	6.0	>200	7.0	1.7	ND	.95
A21B 6-10	08/22		54.4								27
A21B 10-13	08/22		79.4								.2
A21C 4-8	07/14	87.7	23.2	4.2	ND	5.0	>200	7.2	ND	ND	0
A21C 8-11	07/14		72.9								30
A21C 13-14.5	07/14		85.8								0
A21D 4-9	07/10		82.8								0
A21D 9-14	07/10		78.1								.09
A21D 14-19	07/10		69.6								.15
A22A 9-14	07/11		71.4								0
A22A 19-22	07/11		79.4								0
A22A 24-28	07/11		77.4								0
A22B 0-7	08/22	97.4	72.9	0.88	ND	ND	>200	7.8	ND	ND	0
A22B 7-13	08/22		77.2								120
A22C 3-9	08/22	94.9	70.4	1.1	ND	ND	>200	7.9	41.7	6.6	0
A22C 10-15	08/22		79.8								19
A22D 4-9	07/11		80.7								0
A22D 9-14	07/11		74.1								12
A22D 24-27	07/11		84.8								0
A23A 12-13	07/14		87.6								0
A23A 13-19	07/14		74.0								3.99
A23A 19-20	07/14	94.7	66.1	1.3	ND	ND	>200	8.6	9.4	ND	6.9
A23A 21-23	07/14		83.8								150
											1.6

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APPENDIX IX: VOLATILES TABLE

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EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

APPENDIX IX: SEMI-VOLATILES TABLE

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EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

SAMPLE I.D. :	A10	A11B	A11C	A12B	A12C	A13B	A14C	A15B	A15C	A16B	A16C	A21C	A22B	A23A
DEPTH (ft) :	15-17	4-9	2-6.5	3-7	4-9	4.5-6	8.5-10.	6-9	4.5-9	9-12	2-5	4-8	0-7	4-9

PARAMETERS

Phenol	ND	BDL	ND	ND	ND	BDL	ND	ND	ND	610000	BDL	ND	ND	35000
bis(2-Chloroethyl)ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	BDL	ND	5100	ND	BDL	BDL	BDL	BDL	ND	ND	ND
1,4-Dichlorobenzene	BDL	ND	BDL	58000	BDL	39000	730	1100	64000	390000	260000	BDL	BDL	BDL
Benzyl alcohol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	32000
1,2-Dichlorobenzene	BDL	ND	BDL	BDL	ND	12000	BDL	1100	74000	650000	160000	ND	ND	6100
2-Methylphenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	BDL
bis(2-Chloroisopropyl)ether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methylphenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12000
N-Nitroso-Di-n-propylamine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isophorone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitrophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dimethylphenol	ND	BDL	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	55000
Benzoic acid	ND	ND	ND	ND	ND	ND	ND	BDL	ND	ND	ND	ND	ND	280000
bis(2-Chloroethoxy)ethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dichlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trichlorobenzene	ND	ND	8800	BDL	BDL	47000	ND	490	46000	160000	BDL	BDL	ND	3500
Naphthalene	BDL	ND	BDL	ND	ND	ND	ND	ND	ND	ND	BDL	ND	ND	BDL
4-Chloroaniline	BDL	17000	9400	BDL	ND	ND	ND	ND	ND	ND	BDL	ND	ND	73000
Hexachlorobutadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chloro-3-methylphenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	ND	ND	BDL	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorocyclopentadiene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl methacrylate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pyridine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodimethylamine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	BDL	ND	ND	ND
Ethyl methacrylate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Picoline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosomethylethylamine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl methanesulfonate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiethylamine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl methanesulfonate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Aniline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	BDL
Pentachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-Methylphenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12000
N-Nitrosopyrrolidine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetophenone	BDL	ND	BDL	ND	ND	24000	BDL	BDL	BDL	ND	BDL	ND	ND	BDL
N-Nitrosomorpholine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Toluidine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosopiperidine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o,o-Diethylphenethylamine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dichlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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p-nhenylenediamine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitroso-di-n-butylamine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Safrole	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4,5-Tetrachlorobenzene	ND	ND	19000	BDL	BDL	28000	ND	BDL	BDL	BDL	ND	ND	ND
Isoafrole	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Naphthoquinone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,3-Dinitrobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Pentachlorobenzene	ND	ND	15000	BDL	BDL	19000	BDL	BDL	28000	BDL	ND	ND	ND
2,4,6-Trichlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4,5-Trichlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Chloronaphthalene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Nitroaniline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
3-Nitroaniline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Nitrophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzofuran	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,4-Dinitrotoluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diethylphthalate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Chlorophenyl-phenylether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Fluorene	ND	ND	ND	ND	ND	BDL	ND	ND	ND	ND	ND	ND	ND
4-Nitroaniline	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4,6-Dinitro-2-ethylphenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
N-Nitrosodiphenylamine (1)	BDL	ND	ND	ND	ND	ND	ND	BDL	BDL	ND	BDL	ND	ND
4-Broaophenyl-phenylether	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	ND	ND	BDL	ND	ND	ND	ND	BDL	BDL	ND	ND	ND	ND
Pentachlorophenol	BDL	ND	ND	ND	ND	ND	ND	BDL	ND	ND	ND	ND	ND
Phenanthrene	BDL	ND	BDL	BDL	ND	BDL	ND	BDL	ND	BDL	BDL	BDL	BDL
Anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-n-Butylphthalate	BDL	BDL	BDL	ND	BDL	ND	ND	BDL	ND	ND	ND	ND	BDL
Fluoranthene	ND	ND	BDL	BDL	BDL	BDL	ND	ND	ND	BDL	BDL	ND	ND
Pyrene	ND	ND	BDL	BDL	ND	BDL	ND	ND	ND	BDL	BDL	BDL	ND
Butylbenzylphthalate	ND	ND	ND	ND	ND	BDL	ND	BDL	BDL	BDL	100000	ND	BDL
3,3'-Dichlorobenzidine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	ND	ND	ND	ND	ND	ND	ND	ND	ND	BDL	BDL	ND	BDL
bis(2-Ethylhexyl)phthalate	BDL	ND	ND	BDL	BDL	6200	9 190	J8 240	J9 11000	JBDL	ND	BDL	ND 20000
Di-n-Octyl phthalate	ND	ND	ND	ND	BDL	ND	ND	ND	ND	ND	BDL	BDL	ND
Benzo(b)fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(k)fluoranthene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibenzo(a,h)anthracene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzo(g,h,i)perylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dioxane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1-Naphthylamine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Naphthylamine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2,3,4,6-Tetrachlorophenol	ND	ND	ND	ND	ND	ND	ND	ND	ND	BDL	ND	ND	ND
1,3,5-Trinitrobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Giallate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Phenacetin	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Diphenylamine	BDL	ND	ND	ND	ND	ND	ND	BDL	BDL	ND	BDL	ND	ND
5-Nitro-o-toluidine	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

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4-Aminobiphenyl	ND													
Pronamide	ND													
2-sec-Butyl-4,6-dinitrophenol	ND													
Pentachloronitrobenzene	ND													
4-Nitroquinoline-1-oxide	ND													
Methapyrilene	ND													
Aramid	ND													
Chlorobenzilate	ND													
p-Diethylaminoazobenzene	ND													
3,3'-Dimethylbenzidine	ND													
2-Acetylaminofluorene	ND													
7,12-Dimethylbenzidine	ND													
Hexachlorophene	ND													
3-Methylcholanthrene	ND													

** units : ug/kg **

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EPA/CEPRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

TCLP DATA

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CONFIDENTIAL 82-CV-204-WDS

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

TCLFs - Inorganic

Locations: =====	DCA-HB1	DCA-HB2
Parameters -----		
Silver	ND	ND
Arsenic	ND	.18
Barium	3.2	1.4
Cadmium	.056	.011
Chromium	ND	.042
Mercury	ND	ND
Lead	2.6	.093
Selenium	ND	ND

** units: mg/L (ppm)**

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EPA/CEPRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

TCLFs - Organics

	Locations:	DCA-HB1	DCA-HB2
	*****	*****	*****
Compounds:			

2,4-Dichlorophenoxyacetic Acid		BDL	BDL
2,4,5-Trichlorophenoxy Propionic Acid		BDL	BDL
Furidine		BDL	BDL

**units: UG/L (ppb) **

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EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

TCDFs- Volatiles 11-60/MS

Locations:	DCA-HB1	100-HB1
=====	-----	-----
PARAMETERS		
=====		
Chloromethane	BDL	BDL
Bromomethane	BDL	BDL
Vinyl Chloride	BDL	BDL
Chloroethane	BDL	BDL
Methylene Chloride	13 T	32 T
Acetone	200 T	460 T
Carbon Disulfide	BDL	BDL
1,1-Dichloroethene	BDL	BDL
1,1-Dichloroethane	BDL	BDL
1,2-Dichloroethene (total)	BDL	BDL
Chloroform	BDL	4 J
1,2-Dichloroethane	BDL	BDL
2-Butanone	8 J	34
1,1,1-Trichloroethane	BDL	BDL
Carbon Tetrachloride	BDL	BDL
Vinyl Acetate	BDL	BDL
Bromodichloromethane	BDL	BDL
1,2-Dichloropropane	3 TJ	BDL
cis-1,3-Dichloropropene	BDL	BDL
Trichloroethene	BDL	3 J
Dibromochloromethane	BDL	BDL
1,1,2-Trichloroethane	BDL	BDL
Benzene	BDL	4 J
Trans-1,3-Dichloropropene	BDL	BDL
Bromoform	BDL	BDL
4-Methyl-2-pentanone	68 T	66 T
2-Hexanone	BDL	15
Tetrachloroethene	BDL	BDL
1,1,2,2-Tetrachloroethane	BDL	BDL
Toluene	2 T	4 JT
Chlorobenzene	BDL	BDL
Ethylbenzene	3 J	25
Styrene	BDL	BDL
Xylene (total)	16	23
2-Chloroethylvinylether	BDL	BDL
Trichlorofluoromethane	BDL	BDL
Dichlorodifluoromethane	BDL	BDL
Bis(Chloromethyl) ether	BDL	BDL
1,1,1,2-Tetrachloroethane	BDL	BDL
1,2,3-Trichloropropane	BDL	BDL
Chloroacetaldehyde	BDL	BDL
1-Chlorohexane	BDL	BDL

**units: UG/L (ppb) **

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EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

DCA-481 001-80

PARAMETERS

PARAMETERS		
Phenol	BDL	BDL
bis(2-Chloroethyl)ether	BDL	BDL
2-Chlorophenol	BDL	BDL
1,3-Dichlorobenzene	3 J	16
1,4-Dichlorobenzene	47	140
Benzyl Alcohol	BDL	BDL
1,2-Dichlorobenzene	8 J	70
2-Methylphenol	BDL	BDL
bis(2-Chloroisopropyl)ether	BDL	BDL
4-Methylphenol	BDL	BDL
N-Nitroso-Di-n-propylamine	BDL	BDL
Hexachloroethane	BDL	BDL
Nitrobenzene	BDL	BDL
Isophorone	BDL	BDL
2-Nitrophenol	BDL	BDL
2,4-Dimethylphenol	BDL	BDL
Benzoic Acid	BDL	BDL
bis(2-Chloroethoxy)ethane	BDL	BDL
2,4-Dichlorophenol	BDL	BDL
1,2,4-Trichlorobenzene	9 J	57
Naphthalene	13	3 J
4-Chloroaniline	2 J	70
Hexachlorobutadiene	BDL	BDL
4-Chloro-3-methylphenol	BDL	BDL
2-Methylnaphthalene	8 J	BDL
Hexachlorocyclopentadiene	BDL	BDL
2,4,6-Trichlorophenol	BDL	BDL
2,4,5-Trichlorophenol	BDL	BDL
2-Chloronaphthalene	BDL	BDL
2-Nitroaniline	BDL	BDL
Dimethylphthalate	BDL	BDL
Acenaphthylene	.9 J	BDL
2,6-Dinitrotoluene	BDL	BDL
3-Nitroaniline	BDL	BDL
Acenaphthene	BDL	BDL
2,4-Dinitrophenol	BDL	BDL
4-Nitrophenol	BDL	BDL
Dibenzofuran	BDL	BDL
2,4-Dinitrotoluene	BDL	BDL
Diethylphthalate	BDL	BDL
4-Chlorophenyl-phenylether	BDL	BDL
Fluorene	BDL	BDL
4-Nitroaniline	BDL	BDL
4,6-Dinitro-2-methylphenol	BDL	BDL
N-Nitrosodiphenylamine (1)	BDL	BDL
4-Bromophenyl-phenylether	BDL	BDL

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Hexachlorobenzene	BDL	BDL
Pentachlorophenol	BDL	BDL
Phenanthrene	2 J	BDL
Anthracene	BDL	BDL
Di-n-Butylphthalate	BDL	BDL
Fluoranthene	BDL	BDL
Pyrene	BDL	BDL
Butylbenzylphthalate	BDL	BDL
3,3'-Dichlorobenzidine	BDL	BDL
Benzo(a)anthracene	BDL	BDL
Chrysene	BDL	BDL
Cis(2-Ethylhexyl)phthalate	12 5	E JB
Di-n-octyl phthalate	BDL	BDL
Benzo(b)fluoranthene	BDL	BDL
Benzo(k)fluoranthene	BDL	BDL
Benzo(a)pyrene	BDL	BDL
Indeno(1,2,3-cd)pyrene	BDL	BDL
Dibenzo(a,h)anthracene	BDL	BDL
Benzo(g,h,i)perylene	BDL	BDL
2-Chlorotoluene	BDL	BDL
4-Chlorotoluene	BDL	BDL

Units: ug/l (ppb)

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EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

TCRPa - Pesticides/PCEs by GC

Locations: 00A-FBI 00B-FBI
 =====

Compound:
 =====

Alpha-BHC	BDL	BDL
Beta-BHC	.024 J	BDL
Delta-BHC	.011 J	BDL
Gamma-BHC (Lindane)	BDL	BDL
Heptachlor	BDL	BDL
Aldrin	BDL	BDL
Heptachlor epoxide	BDL	BDL
Endosulfan I	BDL	BDL
Dieldrin	BDL	BDL
4,4'-DDE	BDL	BDL
Endrin	BDL	BDL
Endosulfan II	BDL	BDL
4,4'-DDD	BDL	BDL
Endosulfan sulfate	BDL	BDL
4,4'-DDT	BDL	BDL
Methoxychlor	BDL	BDL
Endrin Ketone	BDL	BDL
alpha-Chlordane	BDL	BDL
gamma-Chlordane	BDL	BDL
Toxaphene	BDL	BDL
Endrin aldehyde	BDL	BDL
Aroclor-1016	BDL	BDL
Aroclor-1221	BDL	BDL
Aroclor-1232	BDL	BDL
Aroclor-1242	BDL	BDL
Aroclor-1248	BDL	BDL
Aroclor-1254	BDL	BDL
Aroclor-1260	BDL	BDL

units: UG/L (ppb)

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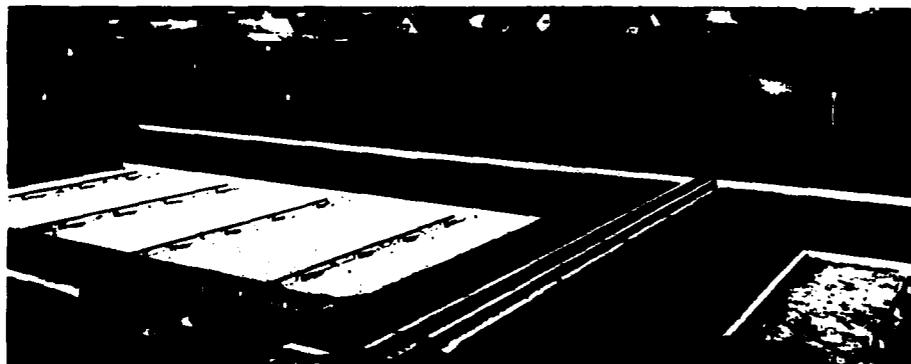
EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

OPERATIONS DIVISION



O M Cost Reduction

The operating and maintenance costs associated with water, wastewater and solid wastes management reflect continuing increases in labor, energy and materials. A thorough review and projection of O. M. costs by the Avedt Group's experienced administrative and operations personnel can identify cost areas where reductions are warranted. Assisting in budget preparation, developing maintenance programs, determining spare parts inventories and performing energy audits are additional services that the firm can provide.



Technical Support

A recognized staff of experts in all engineering specialties including civil, environmental, chemical, electrical, mechanical and control instrumentation is available to provide technical support to clients involved with water and wastes management. Additional technical expertise of agronomists, biologists, chemists, hydrogeologists, planners and estimators is available to complement technical programs. acquire permits and complete the most demanding environmental engineering projects.

Training Program

Avedt Group, Inc. has extensive project experience in the development of plant operating personnel organizations, operator training programs, preventive maintenance work schedules, and continuing operational assistance. Training is conducted both in the classroom and in the field to assure that the proper operating procedures can be demonstrated using available process controls. The firm is a leader in the application of computerized process control, data logging and on-site monitoring of remote facilities.



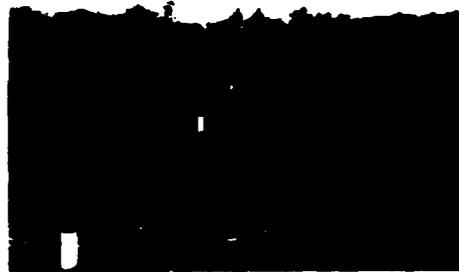
Diagnostic Evaluations

The hands-on experience of our professional staff assures effective resolution of difficult water, wastewater and solid wastes problems. In-plant process modifications and improvements necessary to meet budgets and regulatory agency requirements are provided with design and operating criteria specifically tailored on an individual basis.



Regulatory Compliance Programs

The increasing emphasis on higher degrees of waste management and environmental protection is in direct response to federal legislation. Knowledge of these regulations combined with practical experience in reducing capital and operating expenses allows the Avedt Group, Inc. to provide cost-effective compliance programs for municipal and industrial clients. Site assessments and audits, environmental sampling, waste characterization studies, and permit application preparation are also provided to clients to supplement regulatory compliance programs.



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